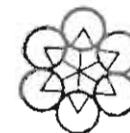


# aipea



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

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**newsletter**February, 1985, n° 21

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

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President's Podium

With the next International Clay Conference approaching, may I ask for your cooperation in two projects :

I am sure that many of you, like myself, have felt the need for good teaching aids in courses on various aspects of clay science. An exchange of ideas, syllabi or exercises among knowledgeable and experienced teachers of clay science or perhaps development of new teaching aids promoted by AIPEA could help to raise the standard of teaching of our science. The Organizing Committee of the 1985 International Clay Conference has scheduled a session devoted to the subject of teaching clay science. Please give this matter your serious consideration and come to the meeting with many original ideas.

Last May I visited Professor S. Hafner, who was then secretary of the International Mineralogical Association, to discuss the possibilities of closer cooperation between AIPEA and IMA. We had some ideas which we hope to implement, but would welcome any suggestions you may wish to make.

The highlight of my AIPEA activities last year was my participation, as a guest, in the first Italian-Spanish Clay Congress and the post-congress field trips. A report on this very stimulating congress appears elsewhere in this Newsletter. I should like to thank the Organizing Committee for their kind invitation and their very warm hospitality. The beautiful scenery of southern Italy was an added attraction, despite unseasonable weather. We may expect that this is the first of many more such fruitful congresses and that other national groups will follow suit and forge closer links with their neighbours.

From the Registration Circular and from the reports I receive from Denver it appears that we can all look forward to a very successful International Clay Conference. Au revoir in Denver ! Meanwhile I wish you all a happy and prosperous New Year.

L. Heller-Kallai

Council Affairs

Notice of Business Meeting

An ordinary Business Meeting will be held on Wednesday August 1st in Denver Colorado (U.S.A.) during the 1985 International Clay

Conference.

The present announcement is the official notice referred to in the article 7 of the AIPEA Statutes.

Membership Status

The membership of AIPEA continues to grow steadily as you can see from Table 1. We now have 818 individual members, 39 institutional members and 8 affiliated societies. The individual membership has increased by 403 over the past six years. This nearly doubles the membership in 1978. To keep the growth, please encourage a colleague or student to join the Association (an application form is on the last page of this Newsletter).

Table 1. AIPEA Memberships (1978-1984)

| Membership         | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984* |
|--------------------|------|------|------|------|------|------|-------|
| Individual         | 415  | 526  | 596  | 668  | 718  | 776  | 818   |
| Institutional      | 28   | 29   | 30   | 31   | 34   | 38   | 39    |
| Affiliated Society | N/A  | N/A  | N/A  | N/A  | N/A  | 4    | 8     |

N/A : Not applicable

\* : As of October 31, 1984.

Financial Status

It is our pleasure to report to you that the general financial status of our Association is a healthy one. The total assets amounted to over \$ 20,000 in US funds. The assets are divided into the general operating fund, travel fund, W.F. Bradley Award Fund and saving fund. Your annual membership fees mostly go to the general operating fund, since the latter three funds are fixed by their respective capitals deposited. The main expenditure is the costs for the printing and mailing of the Newsletter. According to our experience, in the past six years, the average expenditure is approximately \$ 1,800 per year, which should be covered by annual income from the membership fees. On this point, however, may we remind you that on the average, every current year, only 60 % of the total payments for membership fees have been paid within that year. Prompt payment is, therefore, always greatly appreciated.

**International Clay Activities**

AIPEA Committee on Standardization of Preparing Techniques (SPT)

In October 1984, the cooperative programme has been definitively launched when the parcels containing the selected raw sample were sent to 123 participants. These are distributed amongst 31 countries (19 in Europe, 3 in North America, 3 in South America, 4 in Asia, 3 in Africa and 1 in the Middle East). Also the participants belong to different fields such as geology, geochemistry, soil science, raw materials, and geotechnic. Details on how the raw sample must be prepared have been included. The deadline for reception of the analytical results is March 1st 1985.

J. Thorez

Report on the first Italian-Spanish Congress

The First Italian-Spanish Congress on Clays and Clay Minerals organized by the Italian Group of AIPEA and the Sociedad Espanola de Arcillas, was held in Seiano di Vico Equense and Amalfi (Italy) on 24-28 September 1984.

The Congress was dedicated to the memory of Prof. Juan Luis Martin Vivaldi and characterized by the aim to intensify the Italian-Spanish scientific collaboration as well as to give rise to further international activities of the Italian Group of AIPEA.

About 150 participants and 50 accompanying persons from various universities and laboratories of Italy and Spain attended the scientific sessions and social functions; Dr. R.A. Kühnel (Netherland), Prof. G. Panto and Dr. E. Pecsí Donath (Hungary) were also present.

Prof. L. Heller-Kallai, President of AIPEA, and Dr. Juan Luis Martin-Vivaldi Caballero, son of Prof. Juan Luis Martin Vivaldi, together with Prof. C. de Sousa Figueiredo Gomes (Portugal), Prof. J. Konta (Czechoslovakia), Prof. J. Linares (Spain), Dr. E. Mendelovici (Venezuela), Prof. M. Rodriguez Gallega (Spain), Prof. J.M. Serratosa (Spain) and Prof. C. Tchoubar (France) were the official guests.

The Inaugural Ceremony was held on the morning of Monday 24 September in the "Sala Congressi" of the Moon Valley Hotel in Seiano di Vico Equense, a typical village of the Sorrento coast. Welcoming and opening speeches were given by representatives of the Rector of Naples University and the President of Regione Campania, the Directors of the Osservatorio Vesuviano and the Accademia Pontaniana of Naples, the Ambassador of Spain in Italy represented by the Director

of the Instituto Espanol de Cultura Santiago of Naples, the Mayor of Vico Equense and the Chairman of the Organizing Committee.

56 communications were presented orally at the following sessions :

1. Surface Chemistry and Interactions (7)  
(morning of Monday 24 September, Chairmen : L. Heller-Kallai and G.L. Morelli).
2. Geology and Genesis (16)  
(afternoon of Monday 24 September, Chairmen: M. Rodriguez Gallego and L. Dell'Anna; morning of Wednesday 26 September, Chairman: E. Galan and T. Pescatore).
3. Crystal Chemistry and Structure (10)  
(morning of Tuesday 25 September, Chairmen: C. Tchoubar and J. A. Rausell Colom).
4. Soil Mineralogy and Geochemistry (7)  
(afternoon of Tuesday 25 September, Chairmen: M. Sanchez-Gamazano and P. Violante).
5. Ceramic Clays (7)  
(afternoon of Wednesday 26 September, Chairmen: J.M. Gonzalez Pena and C. Palmonari).
6. Geotechnical Properties and Applications (9)  
(morning of Thursday 27 September, Chairmen: P. Fenoll Hach-Ali and F. Veniale).

The Authors of 31 posters, assisted by the Chairmen E. Arduino and J. Konta, were present for discussion of their contribution on the afternoon of Thursday 27 September.

Eight General Lectures opened the morning and afternoon sessions according to the following schedule :

- Monday 24 September (10:00 to 10:45) : L. Heller-Kallai "Do clay minerals act as catalysts in thermal alteration of organic matter in nature ? Problems of simulation experiments".
- Monday 24 September (15:30 to 16:15) : J. Linares "The process of bentonite formation in Cabo de Gata, Almeria, SE Spain".
- Tuesday 25 September (9:00 to 9:45) : C. Tchoubar "Détermination des caractéristiques structurales des argiles par modélisation des diagrammes de diffraction des rayon X".
- Tuesday 25 September (15:30 to 16:15) : M. Rodriguez Gallego "Crystalline defects in layer silicates".
- Wednesday 26 September (9:00 to 9:45) : J.M. Serratosa "Ion distribution in phyllosilicates by spectroscopic methods".

Wednesday 26 September (15:30 to 16:15) : L. Della'Anna "The upper basin of the Ofanto river: some grain-size, mineralogical and chemical factors which show the pattern of sedimentation and the source of minerals".

Thursday 27 September (9:00 to 9:45) : F. Veniale "The role of microfabric in clay soil stability".

Thursday 27 September (15:30 to 16:15) : J. Konta "Clays and non-clay minerals in suspensions of some big world rivers".

On September 26, from 14:30 to 15:30, Prof. Avelino Sotelo Alvarez, Director of the Instituto Espanol de Cultura Santiago of Naples, conducted an Introductory Seminar on "Popular and artistic ceramic in the Italian-Spanish cultural tradition".

A closing cocktail was offered in the panoramic Terme Scrajo Hotel, while a subsequent "arrivederci" dinner was enjoyed at the typical "Pizza a Metro" restaurant, both in Vico Equense on Thursday September 27.

The Awards and the Closing Ceremony were held on the morning of Friday 28 September in the historical "Salone Morelli" of "Palazzo San Benedetto" in Amalfi; the town was reached by bus and by boat along the enchanting coast of the Sorrento Peninsula. The Congress Dinner in the Borgo Marinaro followed the Closing Ceremony.

Official speeches were delivered by the Mayor and the Authorities of the town, the President of AIPEA, the Presidents of the Italian Group of AIPEA and the Sociedad Espanola de Arcillas, the Dean of the Faculty of Science and representatives of Academic Authorities of Naples University and Dr. E. Mendelovici (Venezuela).

Prof. A. Pozzuoli, Chairman of the Organizing Committee, commemorated then Prof. Juan Luis Martin Vivaldi stressing his particular human qualities and the special role of thoughtful teacher and great scientist that expressed but a part of his many-sided personality.

A Parchment and the Amalfi Medal, offered by the Faculty of Science of Naples University and by the Amalfi Township respectively, were awarded to Prof. Juan Luis Martin Vivaldi and given to his son Dr. Juan Luis Martin-Vivaldi Caballero.

The Amalfi Medal was also given to the President of the Scientific Committee Prof. J.M. Serratosa and to the members of the above, as well as to Professors C. Ciliberto, P. Fenoll Hach-Ali, L. Heller-Kallai, J. Konta, G.L. Morelli, M. Rodriguez Gallego, C. Tchoubar and F. Veniale.

Two post-Congress Excursions were performed in Southern Italy:

(a) on September 29, the excursion was guided by Prof. L. Brancaccio and Dr. A. Cinque (Naples University) in the Pleistocene Intermontane Acerno basin of the Salerno Province and ended in the ancient Greek Paestum,

(b) on October 1-2, the excursion was guided by Dr. V. Rizzo (CNR-Institute for the Hydrogeological Protection, Cosenza) in Calabria and dedicated to sediments and deposits of clays of scientific significance from the mineralogical, geological and geotechnical point of view.

The Congress literature comprises the Book of Summaries, the Guidebook for the Excursion in Calabria (by V. Rizzo and A. Pozzuoli) and the Proceedings volume. The Proceedings volume will appear, most probably, as a special issue of "Mineralogica et Petrographica Acta" of Bologna University at the end of 1985 and includes the texts of General Lectures as well as about 60 full contributed papers selected for publication.

A limited number of Books of Summaries and Guidebooks is available at the price of Lit. 6,000 each, or Lit. 10,000 for both volumes (plus postage expenses).

The Proceedings volume should cost about Lit. 30,000. For booking this volume and any further inquiry please write to : Prof. A. Pozzuoli, Secretary of the Italian Group of AIPEA, Department of Geophysics and Volcanology, University of Naples, Largo S. Marcellino 10, 80138 NAPOLI, Italy.

Antonio Pozzuoli

#### National Clay Groups

##### Belgium

The annual meeting of the "Belgian Contact Group on Clays" took place in September in the buildings of the REDCO-ETERNIT Company at Kapelle-op-den-Bos. The local organisers were Dr. C. Bleiman and Dr. O. Anton.

During the morning session and after a general presentation of the activities of the REDCO-ETERNIT group by Dr. C. Bleiman, the two following papers were read:

- Mineral structures as studied by high resolution NMR of Si<sup>29</sup> and Al<sup>27</sup>.

Prof. J.J. Fripiat (CNRS-Orleans, France)

- Mineralogical aspects of the synthetic calcium silicates used in the production of high temperature resisting products.  
Dr. O. Anton (REDCO, Kapelle-op-den-Bos).

After lunch, the participants were lead through a round tour of the site and were able to visit the various production lines and also research facilities.

W.E.E. Stone

Canada

A symposium on "Clay Minerals in Agriculture, Industry and the Environment" was held at the University of Calgary, Alberta, on August 23-25, 1984. Sessions were held on the 23rd and 24th. Twenty-five papers were read, covering a wide spectrum of themes : clays in petroleum industry, geotechnical engineering, mined land reclamation, waste disposal, ceramic technology, sensitive clays, clays in pedogenesis, surface charge and clay properties.

The keynote speaker, Dr. J.L. White from Purdue University, presented some relationships between clay minerals and pharmaceutical industry.

There were about 50 attendees to the sessions, scientists and engineers. The majority were from Canada, but there were also 9 from USA, 3 from Japan, 1 from France and 1 from New Zealand.

On August 25th, a field trip to the Dinosaur National Park was organized.

There was a strong interest to the maintenance and broadening of the interdisciplinary contacts made between workers in applied clay science, and it is planned to hold another meeting in May 1986, in Ottawa, Ontario.

Christian De Kimpe

China

The Second National Symposium on Clays and Clay Minerals of China was held in Tongan County, Fujian Province on 26-31 October 1984. It was organized by the Association of Nonmetallic Mineral Deposits, the Association of Sedimentologists of the Geological Society of China and the Geological Society of Fujian Province, under the auspices of the government of Tongan County, the Geological Bureau of Fujian Province and the Xiamen Kaolin Company.

About 150 participants from different provinces and institutes

attended the Symposium, 184 papers were presented in the following 4 sessions :

1. Kaolins.
2. Bentonites, Sepiolite and Attapulgite Clays.
3. Shales.
4. Refractory Clays.

There were many papers on the themes of "Mineral Deposits", "Crystallography", "Clays of Recent Marine Sediments", "Clays from Qinghai-Tibet Plateau", "Regular and Irregular Interstratified Clay Minerals", "Clay-organic Interactions", "Tonstein", "Clay Mineral Applications", etc... .

Abstracts of these papers will be published in a special number of "Geological Information of Fujian Province".

A field excursion was arranged to visit the Kaolin Deposit in Gdeshan district.

Zheng Zhi

Czechoslovakia

In February 1984, the Czechoslovak Group for Clay Mineralogy and Petrology organized a Seminar evaluating the 5th Euroclay Meeting held from August 31 to September 3, 1983 in Prague. The Editor of the 5th Euroclay Volume informed the participants of the Seminar about the accepted papers and the necessary improvements of some manuscripts written by colleagues whose native language is not English. The volume is in press and the 1st proof will be mailed to the authors in January 1985. The 5th Euroclay Volume will appear in July 1985 and can be obtained on the exchange basis against valuable manuals or monographs from the Editor (Jiri Konta, Charles University, Albertov 6, Prague 2, Czechoslovakia). This should be of particular interest to those members of AIPEA involved in clay exploration, research, and teaching who were not able to attend the 5th Euroclay Meeting.

In May 1984, a short meeting was organized by our Group. The program was as follows: Z. Borovec: Bonding possibilities of uranium and radium on the rock forming constituents (45 minutes). K. Melka: The classification of serpentine minerals (45 minutes). J. Konta: A reminiscence of G.W. Brindley (30 minutes).

In November 1984, the first meeting of the Organizing Committee preparing the program of the 10th Conference on Clay Mineralogy and Petrology in Czechoslovakia was held in Prague. This jubilee conference will be held on a broad international basis in Ostrava,

an industrial town in northern Moravia in summer 1986. The University of Mining and Metallurgy in Ostrava will be the host of our 10th Clay Conference.

All these meetings took place at the Department of Petrology, Charles University, Prague 2.

Jiri Konta

East Germany (GDR)

The 6th conference on "Clay Minerals - Genesis, Deposits and Industrial Applications" was held from October 25-27, 1984 in Greifswald at the Department of Geological Sciences of the University of Griefswald. 115 participants from the GDR and 25 guests from Czechoslovakia, Poland, Hungary, the Soviet Union, Roumania, Bulgaria, Vietnam and Cuba presented 45 papers on the following subjects :

- Structure and analysis of clay minerals (10)
- Geochemistry and petrology of clays (12)
- High temperature phase formation ( 6)
- Clay/Water system, decomposition of clays by acids ( 6)
- Processing and industrial applications (11)

In the laboratories of the Department of Geological Sciences discussions on special techniques were held and scientific devices were shown in operation.

- Automation of x-ray diffractometry (with the diffractometer type HZG 4, manufactured by Freiburger Präzisionsmechanik)
- Gold decoration of kaolinite
- Dilatometry by means of a derivatograph (manufactured by MOM, Budapest)
- High-degree magnetic separation of clay minerals
- Glow discharge low temperature ashing of coal and organic substances.

A one-day excursion to the Isle of Usedom was also organized.

M. Störr

West Germany (FRG)

In 1983 the DTTG has held a conference in Freising on 19th March. About 35 participants attended the meeting which was following a two days conference of Commissions of the Association of Soil Science dealing with "Clay problems".

During the business meeting the members decided to apply for the affiliated membership in the AIPEA. This membership became effective on 1st January 1984.

From 20th to 22nd September 1984 an joint meeting of the DTTG and the Austrian Mineralogical Society took place in Vienna. An invited paper "Application of clays and clay minerals" has been presented by H.H. Murray (Bloomington). Further 17 papers dealing with problems of application, technology, soil sciences and diagenetic processes have been presented and discussed. The sessions have been followed by two days of field trips.

In the future the national meetings of the DTTG will be arranged in the years between the international conferences (International Clay Conference, Euroclay).

F.J. Eckhardt

Great Britain and Ireland

A meeting was held on 12-13th April 1984 at the University of Bristol on the theme "Diagenesis and Low Temperature Metamorphism" sponsored by the Mineralogical Society and Geological Society of London, and organised by the Clay Minerals, Geochemistry and Metamorphic Studies Groups. The following papers were presented :

- The transition from diagenesis to low-temperature metamorphism in the Alps - A review.  
M. Frey (University of Basel, Switzerland).
- The step from diagenesis to low grade metamorphism in the Taconic Belt of the northern Appalachians in Quebec.  
R. Hesse (McGill University, Montreal).
- Accretion-related low grade metamorphism in the Southern Uplands/Longford-Down accretionary terrain.  
A.E.S. Kemp (University of Edinburgh) & G.J.H. Oliver (University of St Andrews).
- Significance of illite crystallinity and  $b_0$  values of K-white mica in low grade metamorphic rocks, North Hill End Synclinorium, N.S.W., Australia.  
R. Offler (University of Newcastle, Australia) & E. Prendergast (University of Macquarie, Australia).
- A transition from diagenesis to greenschist facies within a major Variscan fold/thrust complex in south-west England.  
T.J. Primer (University of Bristol).
- Correlation between the parameters of burial diagenesis and inci-

- ipient metamorphism: causes of divergency.  
H.J. Kisch (Ben Gurion University of the Negev, Israel).
- Diagenesis and metamorphism in argillaceous rocks.  
B. Velde (Ecole Normale Supérieure, Paris).
  - The nature of some illite clays from bentonites and sandstones : possible implications for the conversion of smectite to illite during diagenesis.  
P.H. Nadeau, M.J. Wilson, W.J. McHardy & J.M. Tait (Macaulay Institute, Aberdeen).
  - Phase equilibria and mineral parageneses of metabasites in low grade metamorphism.  
J.G. Liou, S. Maruyama & M. Cho (Stanford University, California).
  - Controls of regional coal rank variation in eastern Pennsylvania, U.S.A..  
J.R. Levine, S.T. Paxton & A. Davis (McGill University, Montreal).
  - Compositional variation within authigenic chlorites and some comments on their stability.  
C.D. Curtis, C.R. Hughes, J.A. Whiteman & C.K. Whittle (University of Sheffield).
  - White micas and chlorites of Cambrian greywackes from western Morocco. Their mineralogical and chemical evolution from diagenesis to low grade metamorphism.  
E. Wybrecht, J. Duplay, A. Pique & F. Weber (Université Louis Pasteur de Strasbourg).
  - Isotopic studies of shale and sandstone diagenesis.  
S.M. Savin, M. Lee & J. Aronson (Case Western Reserve University, U.S.A.).
  - Oxygen and hydrogen isotope geochemistry of Cretaceous bentonites and shales from the Distrubed Belt, Montana.  
E.V. Eslinger (Cities Service Oil and Gas Corp., Tulsa) & H.W. Yeh (University of Hawaii).
  - The stable isotope composition of fluids involved in the alteration of Lower Palaeozoic rocks of the English Lake District.  
L.J. Thomas (University of St. Andrews).
  - Pore water circulation in sedimentary basins and its control on the formation and alteration of clay minerals in sandstones.  
K. Bjorlykke (University of Bergen).
  - Diagenetic reactions within an overpressured zone - compositional buffering of pore fluids.  
I. Hutcheon (University of Calgary).

- Diagenetic studies in active burial settings of Texas and California.  
J.R. Boles (University of California).
  - Geothermal metamorphism of sedimentary rock in the Salton Trough/Imperial Valley, U.S.A. and Mexico.  
S.D. McDowell (Michigan Technological University).
  - Putting diagenesis and metamorphism to use. Geothermal fields as natural analogues of nuclear waste repositories in salt.  
W.A. Elders & J.B. Moody (University of California).
  - Calc-silicate mineral paragenesis in the Cerro Prieto Geothermal System, Baja California, Mexico.  
P. Schiffman, W.A. Elders & D.K. Bird (University of California).
  - Electron optical studies of clay intergrowths in diagenetic and metamorphic phyllosilicates.  
S.H. White, J.M. Huggett & H.F. Shaw (Imperial College).
  - K-Ar and Rb-Sr dating of shales and carbonate rocks along a metamorphism-diagenesis profile in the Northern Calcareous Alps (Salzburg, Austria).  
M. Kralik (University of Vienna) & J.M. Schramm (Inst. f. Geowissenschaften, Salzburg).
  - Geochronological, mineralogical and microstructural investigation of cleavage formation in Southern Upland slates.  
R.A. Cliff, J.C. Runziker, R.J. Knipe, D.T. Needham & D.C. Rex (University of Leeds).
- The Autumn Meeting of the Group was held on 9th November, 1984 in the Meeting Room of the Royal Entomological Society, 41 Queen's Gate, London, with the following papers being read :
- Clays and associated layered minerals in stony meteorites.  
D.J. Barber (University of Essex).
  - A theoretical approach to the chemistry of phyllosilicates.  
H.D.B. Jenkins (University of Warwick).
  - Diffusion of water and pyridine in the interlayer space of montmorillonites-relevance to kinetics of catalytic reactions on montmorillonites.  
C. Breen, J.M. Adams and C. Riekel (University College of Wales, Aberystwyth).
  - Estimation of iron oxides in soil clays by profile refinement combined with differential X-ray diffraction.  
G. Brown and J.G. Wood (Rothamsted Experimental Station).
  - Compositional variations of the Unterruparoth beidellite.  
P.H. Nadeau, V.C. Farmer, W.J. McHardy and D.C. Bain (Macaulay

Institute).

- High and low temperature serpentinization of ultramafic rock; an example from the Semail ophiolite nappe, Northern Oman. C. Neal (Institute of Hydrology) and G. Stangert (The Open University).
- Diagenesis in shales - evidence from backscatter SEM studies. T.J. Primmer and H.F. Shaw (Imperial College).

The following committee was elected at the Annual General Meeting to serve 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 A.G. Leach    |
|                   | Dr W.J. MacHardy |
|                   | Mr R.J. Merriman |
|                   | Miss N. Pallatt  |
|                   | Dr M.J. Pearson  |

Future Meetings

Spring 1985

A joint meeting with the Engineering Geology Group of the Geological Society on "The Geotechnical Properties of Clays" will be held on 12th March 1985 at the Geological Society, Burlington House, Piccadilly, London. Further information may be obtained from the Group Secretary - Dr D.C. Bain, Department of Mineral Soils, The Macaulay Institute for Soil Research, Aberdeen AB9 2QJ. Papers presented will be published in a special issue of Clay Minerals in 1986.

Another conference organized jointly by the Clay Minerals Group and the Petroleum Exploration Society of Great Britain will be held at the Department of Engineering, University of Cambridge on "Features and Problems of Mineral Diagenesis within Hydrocarbon Reservoirs". The meeting will be residential and will take place from 2-4th April 1985. A copy of the programme and further details can be obtained from Dr C.V. Jeans, Department of Applied Biology, Pembroke Street, Cambridge CB2 3DX. Thanks to support from the oil industry, many of the papers presented will be published in a special issue of Clay Minerals in 1986.

Autumn 1985

The Group's Autumn Meeting will be held in November in the Meeting Room of the Royal Entomological Society, 41 Queen's Gate,

London on the theme "Particle Movement in Rocks and Soils". Further details will be available from the Group Secretary later in the year.

Special Issues of "Clay Minerals"

Three special issues of "Clay Minerals" are available on an individual basis :

1. Volume 18 number 4 - devoted to papers read at a meeting on "recent developments in clay mineral applications" held at Aberystwyth, UK, 29 March 1983. Cost - £ 10 post free (£ 7 to members of the Mineralogical Society).
2. Volume 19 number 3 - devoted to papers read at a meeting on "patterns of mineral diagenesis on the N W European continental shelf and their relations to facies and hydrocarbon accumulation" held at Cambridge, UK, 7-8 April 1983. Cost - £ 15 post free (£ 10 to members of the Mineralogical Society).
3. Volume 19 number 5 - devoted to papers read at a joint meeting of the Thermal Methods Group of the Royal Society of Chemistry and the Clay Minerals Group of the Mineralogical Society on "Clays, Minerals and Thermal Analysis - a tribute to Dr R.C. Mackenzie" held in London, 7-8 November, 1983. Cost - £ 12 post free (£ 8 to members of the Mineralogical Society and the Thermal Methods Group).

Copies of these issues may be obtained from the Publications Manager, Mineralogical Society, 41 Queen's Gate, London SW7 5HR.

D.C. Bain

Hungary

Section for Clay Mineralogy of the Hungarian Geological Society : Activity in the year 1984.

In 1984 three normal sessions were held in Budapest with the following programme :

February 6

Szőr, Gy., Kozák, M., Barta, I.: Occurrence of fire-clay near Kővágóőrs, Balaton Highland.

April 2

Viczián, I., Szántó, F., Földvári, M.: Report on the 5th Meeting of European Clay Groups, Prague, 1983.

April 9

Presentation of the lectures prepared for the 27th International Geological Congress, Moscow :

Pesty, L. : Experimental modelling of palagonitization.

Viczián, I.: Clay mineralogy of Tertiary molasse basins adjacent to the Alp-Carpathian System.

Tóth, M.: Crystallinity of various genetic types of Hungarian kaolinites.

Pécsi-Donáth, É. : Adsorption of heavy metals on zeolite-containing rocks of Tokaj Mts. (N. Hungary).

On 20th and 21st September, the 2nd Illite Meeting was organized. The first Illite Meeting was held one year before at Zamárdi. After that meeting two standard samples of the Füzérradvány illite locality were prepared and distributed among different Hungarian mineralogical laboratories. The results of the investigations on these standard samples were reported and compared during the session held at Mád (Tokaj Mts.). The following methods were applied :

- X-ray diffraction : Vassányi, I., Szegedi, A., Tóth, M., Viczián, I.
- IR spectroscopy : Földvári, M.
- Thermal analysis : Bidlé, G.
- Electron diffraction and HRTEM : Dódonny, I.
- Water vapour adsorption : Juhász, A.Z. and
- High temperature reactions : Gábor, P., Pópl, L., Földvári, M.

A preliminary evaluation of the results was given by Lenkei, M. and Molnár, B.. Mining and technological problems of the raw material of the Füzérradvány locality were discussed by Mátyás, E.

On 21st September, the participants to the meeting visited the Füzérradvány Mine and the Hollóháza China Factory.

István Viczián

India

A National Symposium on "Sorption phenomena in soils with special reference to environmental protection" was held during October 24-25, 1983 at IARI, New Delhi under the joint auspices of the Clay Minerals Society of India and the Department of Environment, Government of India during the annual meeting of the Clay Minerals Society of India. The Symposium was attended by about 50 delegates from different Universities and Research Institutes in India, who have presented papers in three technical sessions.

Session 1. Interaction of pesticides with soils and their constituents.

- I) Interaction of methyl parathion with soil and model soils - M. Adhikari, A. Ray and S.K. Sanyal (Calcutta).
- II) Adsorption of methabenz thiazuron on eight soils of Hyderabad - Mrs. Saroja Raman & K. Ranga Rao (Hyderabad).
- III) Adsorption of metaxuron on some soils and their constituents - Mrs. Saroja Raman & P.C. Rao (Hyderabad).
- IV) Adsorption and desorption of carbofuran and bendiocarbon on soils and clay minerals - N.P. Agnihotri & P.K. Garg (New Delhi).
- V) Adsorption of N-chloro-para toluene sulphonamide on Zn<sup>2+</sup> - exchanged montmorillonite - B.S. Jai Prakash & H. Jaya Kumar (Bangalore).
- VI) Adsorption and reactions of 1,3-dimethyl (2-benzothiazolyl) urea with montmorillonites - R. Kumar, D. Kumar, R. Prasad & G. Saxena (Shikohabad).

Session 2. Adsorption of heavy metal ions in soil systems

- I) Thermodynamics of zinc sorption on bentonite and soil clays derived from Vertisols - Deo Pal & T.G. Sastry (New Delhi).
- II) Adsorption of zinc by some medium fine textured arid zone soils - D.C. Joshi (Jodhpur).
- III) Zinc sorption of some arid zone soil clays - J.S. Chaudhuri & R.P. Dhir (Jodhpur).

Session 3. Transport and movement of sorbed materials in soil systems

- I) Thermal diffusion of water in soil clays - S.K. Sanyal, Nasim Ali & M. Adhikari (Calcutta).
- II) Exchange behaviour of K-Ca and Na-Ca cation pairs in soils, clay organic complexes and soil clays - M.B. Sen Gupta & D.K. Kundu (New Delhi).
- III) Potassium dynamics of U.P. soils: Q/I relationships - K.P. Tomar (New Delhi).

Many of these papers are published in Clay Research in Vol. 2 (1983) and Vol. 3 (1984).

The Executive Council of the Clay Minerals Society of India was elected during the annual meeting (for 1984 & 1985) :

President : Prof. S.K. Mukherjee  
 322 Jodhpur Park, Calcutta 700 068

Vice-Presidents : Dr. K.V. Raman (Hyderabad)  
 Prof. Dr. T. Ramamurthy (New Delhi)

Secretary & Editor : G.S.R. Krishna Murti  
 Division of Agricultural Physics  
 I.A.R.I., New Delhi 110 012

Treasurer : T.V. Rao (New Delhi)

Joint Secretaries : S.K. Ghosh & B.S. Kapoor (New Delhi)

Members : P.S. Sidhu (Ludhiana)  
 Y.N. Rao (New Delhi)  
 D.K. Pal (Nagpur)  
 R.P. Dhir (Jodhpur)  
 M. Adhikari (Calcutta)  
 S.S. Sahu (Kalyani)  
 A. Sreedharam (Bangalore)  
 V.A.K. Sarma (Bangalore)  
 K.V.G.K. Gokhale (Kampur)  
 Dinesh Kumar (Shikohabad)

The official publication of the Society "Clay Research" is being published twice in a year. The Volume 2 (1983) issues of the Journal were released in 1984. Research papers on any aspect of clay science can be submitted for publication in the Journal. Detailed information can be obtained from the Editor.

G.S.R. Krishna Murti

Israel

The annual meeting of the Israel Society for Clay Research took place on April 9th 1984 and was hosted by the Institute of Soils and Water of the Agricultural Research Organization of Israel.

Nine papers were presented covering a wide range of topics. These included the genesis of hydrothermal nontronite, separation of kaolinitic sand, a model for the adsorption of cations in a close system of clays, and the adsorption of a number of organic and mineral substances on clays.

The Meeting was attended by some thirty scientists and was organized by the Executive Council of the Society.

A new Executive Council was elected at the Annual Meeting for the year 1984-85 :

Chairman : Prof. S. Yariv  
 Secretary : Dr. Z. Grauer  
 Treasurer : Dr. M. Gal

U. Mingelgrin

Japan

The 28th annual meeting of the Clay Science Society of Japan took place in Sendai from October 16 to 20th.

Three symposia were organized on the following themes :

- 1) Utilization of zeolites;
  - 2) Synthesis of Clay Minerals and
  - 3) Genesis and Properties of Clays Minerals in Natural Environments.
- There were also three general lectures devoted respectively to :
- 1) the role of altered minerals in the investigation of geothermal sources (Dr. S. Sumi);
  - 2) Genesis and properties of allophane-free volcanic ashes (Dr. S. Shoji), and
  - 3) On recent problems of Sepiolite (Dr. R. Otsuka).
- During this meeting, 42 other papers were also read.

Mitsuo Sato.

Poland

Our Polish colleagues have the pleasure and the privilege to announce, that Professor Jiri Konta, Head of the Department of Petrology, Charles University, Prague has been elected as a Honorary Member of the Mineralogical Society of Poland.

South Africa

Members of the Clay Interest Group of the Mineralogical Association of South Africa (MINSAs) met twice in 1984.

On February 9th, at MINTEK, Johannesburg-Randburg, a meeting was attended by eight members who introduced their clay activities and interests that are summarised below: Geology of clays, Clays as raw materials for industries, Technical application and ceramic properties of kaolinitic clays, Engineering aspects of clays, The influence of clay minerals on soil characteristics, Metal deposits with special reference to clay minerals. Due to the different interests of the South African clay group members, the possibilities for co-operation in clay research and technology were felt to be limited at this stage to an elaboration of clay investigation methods. It was agreed upon an XRD investigation of three multi-component samples by the Clay Interest Group members in the laboratories at their disposal prior to a three-day workshop on X-ray diffraction techniques (samples preparation for XRD analysis, production of X-ray patterns, qualitative and quantitative interpretation of X-ray diffractograms).

The National Building Research Institute of the C.S.I.R. in Pretoria hosted this workshop from September 5 to 7, that was attended by nine members. The samples chosen to elaborate upon were a two-component halloysite, kaolinite sample from Ixopo; a three-component smectite, kaolinite, illite sample from Duffscot and a four-component tosudite, kaolinite, mica-smectite interstratification, pyrophyllite sample from Beit Bridge.

The analytical results achieved at the workshop and in the various laboratories were compared and discussed. Two points emerged as being important for the comparability and reproducibility of results :

1. Care must be taken in the separation of <2 µm fraction from a suspension; and
2. More attention must be paid to the X-ray diffractometer set-up for the special conditions of low angle X-ray diffractometry.

Two papers were presented at the workshop: Dr D. Böhmann presented guidelines for the X-ray identification of phyllosilicate clay minerals and Dr H.V.R. von Rahden focussed upon current possibilities and limits of quantitative X-ray diffraction analysis.

The Clay Interest Group of the MINSA applied to the AIPEA for the status of an Affiliated Society.

D. Böhmann

Spain

At the General Assembly of the Spanish Clay Society (S.E.A.) held in Madrid on September 20, 1984, took place the election of new members of the Council. Composition of the Council to serve for the two coming years is as follows :

- |                 |                                  |
|-----------------|----------------------------------|
| President       | : Prof. Dr. E. Galan (new)       |
| Vice-president  | : Dr. J. Linares                 |
| Secretary       | : Dr. J.L. Perez-Rodriguez (new) |
| Treasurer       | : Dr. J. Cornejo (new)           |
| Council members | : Dr. M. Sanchez-Camazano        |
|                 | Dr. A. Ruiz-Amil                 |
|                 | Prof. Dr. J. Torrent (new)       |
|                 | Dr. A. Varela (new)              |

The annual meeting of the Society was held jointly with the "Gruppo italiano dell'AIPEA" in Seiano di Vico Equense and Amalfi (Italy) on September 24-28, 1984 (see details p.4-7).

J.M. Serratosa

U.S.S.R.

The central scientific event of 1984 was the 27th International Geological Congress which took place in Moscow, 4-14 August. The clay themes were presented at different sessions of its rich programme, especially at the sessions 04 (sedimentology, hypergenesis and sedimentogenesis), 10 (mineralogy, crystal chemistry and typomorphism), 11 (geochemistry), and 15 (non-metallic ores).

Near Miass (Ural), a summer school-seminar has been organized in July on diffraction methods for the study of layer silicates (X-ray and electron diffraction, electron microscopy).

The 13th All-Union Clay Conference will take place in Alma-Ata in September 1985.

The Leningrad Department of the Publishing House "Nauka" has published a volume of collected works on the X-ray study of layer and framework silicates, Editor V.A. Frank-Kamenetski. It contains chapters on micas, kaolinites, montmorillonites, vermiculites, glauconites and mixed-layer minerals.

The Moscow Department of "Nauka" has published the booklet of S.S. Chekin "Crystallogenesi of Clay Minerals (applied aspects)". It considers the weathering of silicates, crystal growth of clay minerals, the intercalation mechanism of organic liquids in kaolinite and halloysite crystals, with the use of electron microscopy (first of all decoration) data obtained by N.D. Samotoin and results previously published by the author together with N.D. Samotoin and A.I. Finko.

B.B. Zvyagin

**Eighth International Clay Conference - 1985**

The hosts of the conference, the Clay Minerals Society and the U.S. Geological Survey, are pleased to have the opportunity to entertain the members of AIPEA and urge all to make the effort to attend. The conference is July 28 - August 2, 1985, in Denver, Colorado. The local organizing committee has planned an excellent technical program, comprehensive field trips, and an outstanding social program, all of the scope and quality expected for an international meeting. All of these programs are described in the registration circular. AIPEA members should have received the registration circular for the conference in September, 1984. If you need a copy or have questions about the conference, write immediately to : 1985 International Clay Conference, c/o Western Experience, Ltd., 2450 Central Avenue, Suite p2, Boulder, Colorado 80302, U.S.A..

To save time, you may instead copy the registration forms from a colleague's circular.

As with any conference, there are deadlines. The first deadline, for receipt of abstracts, will have passed when you read this. The next deadline, April 1, 1985, is for receipt of all fees paid in full, including the pre-registration fee and fees for field trips, workshop, and optional social events. Registrants for the field trips and workshop must also pay the conference pre-registration fee by April 1. The local organizing committee has obtained generous donations and pledges from industry and government, which allow subsidizing over half of the true costs of the technical and social programs in Denver. Subsidies for students and accompanying guests is an even greater proportion of true cost. The subsidy is sufficient to permit free participation in the major social events for all those who pre-register by April 1, 1985. Because of the extensive and detailed planning required for the social events, it will not be possible to include on-site registrants in most of the major social events. As with most conferences of similar scope, therefore, pre-registration is strongly encouraged, whereas on-site registration is discouraged. For comparison, the pre-registration fee for AIPEA members for the 1981 International Clay Conference in Italy was \$ 200 US, exactly the same as for the 1985 conference in Denver.

The final circular containing detailed plans and instructions will be mailed to all pre-registrants about June 15, 1985, and to all others who request one. Field-trip participants will receive separate instructions from the field-trip Leaders. Please come to Denver. Please pass the word to your colleagues and students who would benefit from attending. Please bring your family members and friends, a rewarding professional, social, and cultural experience awaits you.

Jack Hayes

Calendar of Meetings

- March 12th : London. Joint meeting of the C.M.G. and the Engineering Geology Group of the Geological Society on "The Geotechnical Properties of Clays". Information from Dr D.C. Bain, The Macaulay Institute for Soil Research, Aberdeen, AB9 2QJ, U.K.
- April 2-4th : Cambridge. Joint meeting of the C.M.G. and the Petroleum Exploration Society of

Great Britain on "Features and Problems of Mineral Diagenesis within Hydrocarbon Reservoirs". Information from: Dr. C.V. Jeans, Department of Applied Biology, Pembroke Sheet, Cambridge, CB2 3DX, U.K..

- July 1-13th : Bad Windsheim, F.R.G.. Nato Advanced Study Institute on "Iron in Soil and Clay Minerals". Information from : NATO ASI, University of Illinois, Agronomy Department, W201 Turner Hall, 1102 S Goodwin, Urbana, Il. 61801, U.S.A..
- July 21-27th : Atlanta, Georgia (U.S.A.) to Dallas, Texas Soil Mineralogy and Genesis Intercongress Excursions and Technical Sessions in Southeastern. The field trip is designed to exhibit with natural examples many of the colorful oxides that influence aggregation and soil properties of weathered soils. Information : J.B. Dixon, Department of Soil and Crop Sciences, College Station, Texas 77843-2474, U.S.A..
- July 28th - August 2nd : Denver, Colorado. 8th International Clay Conference. Information : C.O. Western Experience, Ltd, 2450 Central Avenue, suite p.2, Boulder, Colorado, 80302 U.S.A..
- August 12-16th : Budapest. Zeolite '85. Information : Dr J. Engelhardt, Central Institute for Chemistry, P.O. Box 17, H 1525 Budapest.

New Books

- Störr Manfred  
Die kaolinlagerstätten der Deutschen Demokratischen Republik. Berlin : Akademie-Verlag, 1983. 226 S., 110 Abb., 75 Tab. (Schriftenreihe für Geologische Wissenschaften: 18).
- Schomburg, Joachim and Manfred Störr  
Dilatometerkurvenatlas der Tonmineralrohstoffe. Berlin: Akademie-Verlag, 1984. 88 S., 119 Abb., 4 Tab. (Schriftenreihe für Geologische Wissenschaften: 21).

Singer A. and Galan E. (Eds).

Palygorskite - Sepiolite : Occurrence, Genesis and Uses.  
Amsterdam : Elsevier, Developments in Sedimentology, Vol. 37,  
1984.

Besoain E.

Mineralogia de Argillas de Suelos, IICA, Costa Rica. US \$ 30.

#### LAST NEWS

Soil Mineralogy and Genesis Intercongress Excursion -  
Atlanta to Dallas (USA) - July 21-27, 1985.

Information is also available from A and M Travel Service  
Inc., 701, University Drive East, College Station, Texas, USA.  
The price of this field trip is \$ 460 per person.

# aipea



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

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