In this issue

President's Podium 2

Council Affairs 3


Reports on the Technical Sessions, General Assembly, Meeting of the Nomenclature Committee, Field Trips and Publications

1981 International Clay Conference (Italy) 12

First announcement

Recent Deaths 13

Obituaries for Dr. J. Chaussidon and Prof. J. Orcel

International Clay Activities 15

Fourth Meeting of European Clay Groups, IGCP Working Group on Genesis of Kaolins, NATO Conference on Advanced Chemical methods for Soil and Clay Minerals Research

National Clay Groups 19

Czechooslavkia, France, German Federal Republic, Great Britain, Hungary, Italy, Japan, Poland, Scandinavia, USSR, USA

Calendar of Meetings 28

New Books 29

Membership Application Form 31
President's Podium

It was indeed a great and most unexpected honour to have been elected your President for the next three years. As you will appreciate, it is a somewhat formidable task to follow in the steps of those who have so wisely guided CIPFA and AIPEA through the early years - Dr. Henin, Prof. Grim, Prof. Rosengqvist, Dr. Graff-Petersen, Academician Chukhrov, Prof. Fripiat and Prof. Bailey - and I can only crave your indulgence should I seem to falter.

The strength of AIPEA lies, however, not in its President but in its Officers, Council, Correspondents and Members and here it is only fitting to express, on behalf of all members, our sincere thanks to our Retiring Officers and Council Members for their efforts on our behalf. It will not be taken amiss, I hope, if special reference is made to the services of Prof. Udo Schwertmann who, as Secretary General, has carried the main burden of administration for twelve years. He richly deserves all our thanks.

It is with great regret that your new Council has most reluctantly accepted the resignation of Prof. George W. Brindley as Chairman of the Nomenclature Committee after twelve years service. We would thank him for the time and labour so freely given to smoothing the path of the clay mineralogist in the thorny field of classification and nomenclature. AIPEA is indeed fortunate in having in its midst eminent scientists willing to share their detailed knowledge and expertise to solve problems for others. Fortunately, we are not to lose his services entirely, as he has agreed to stay on as an ordinary member of committee - a gesture much appreciated by his successor as Chairman, Prof. S.W. Bailey. It is nice to see that Past-Presidents do not even fade away in AIPEA and we wish Prof. Bailey all success for, we hope, the next twelve years at least! The Nomenclature Committee has suffered another loss through the resignation of Dr. Georges Pedro who has carried the Secretarial responsibility, also for twelve years. Dr. Pedro's interest in nomenclatural aspects has always been profound and we can only express our sincere appreciation for all his efforts.

Council has agreed that the next International Clay Conference be held in Italy in September 1981. The organization of this Conference is in the capable hands of Prof. F. Venale, who along with his Italian colleagues has already carried out an admirable amount of spade-work. Present intentions are that the Conference start in Bologna and finish at Pavia with a day in Milano during transit. Such a peripatetic arrangement is new to AIPEA but should give rise to a very interesting conference. Further information will be in the first circular to be issued in Spring 1979. Those of us who know Italy look forward eagerly to renewing acquaintance with the beautiful country and its warm people and to introducing it to those of our friends who have been less fortunate.

I would close this brief "comment column" by asking any members who may have criticisms of AIPEA, ideas for improving its effectiveness, suggestions for increasing membership, etc., to communicate these either to the Secretary General, Dr. Brouwer, or myself: alternatively, you could pass them on through your nearest Council Member. We would all like to see our organization no less effective in the future than it has been in the past.

Since writing the above I have received the very sad news of the untimely death of one of our newly elected Council members, Dr. J. Chaussidon. Dr. Chaussidon was well known in AIPEA circles, and indeed by clay mineralogists everywhere, for his many and important contributions to our science. A full appreciation of the man and his work will appear elsewhere in the Newsletter, but I should like here to pay personal tribute to an eminent scientist with a particularly warm, friendly and unassuming personality who will be deeply mourned by all who knew him. I know my Council colleagues would wish me to take this opportunity of expressing our deepest sympathy to Mme Chaussidon and the family - whom we met so recently in Oxford - in their bereavement, as well as to his colleagues at the Station de Science du Sol, Versailles, in their great loss.

R.C. Mackenzie

Council Affairs

Membership list

The last membership list of the AIPEA dates from March 1972 (Newsletter No. 6) and there have undoubtedly been many changes since then. Such a list allows members to obtain the addresses of other members and, perhaps, to notice the absence of colleagues who might profit from membership of our society. As funds now permit the publication of such a list, efforts are being made to publish one in the near future.

Statutes and By-Laws

There is also a need for publishing the Statutes and By-Laws of AIPEA. This holds particularly for the Organizing Committees of the International Clay Conferences, but individual members - especially those attending these conferences - often like to know the rules governing the activities of the Association. The last and only time the Statutes and By-Laws were published was in AIPEA Newsletter No. 1 (1967). It is our intention, therefore, to include the Statutes and By-Laws in the next Newsletter.

Membership dues

There are quite a few long-standing members, who presumably simply forgot to pay the membership fees after 1976. They may be deleted from the membership list, according to the By-Laws. It is therefore in their own interest to pay their outstanding dues as soon as possible. For membership fees and application form please see page 31.

1978 International Clay Conference (England)

General aspects

The Sixth International Clay Conference organized by the Clay Minerals Group of the Mineralogical Society of Great Britain and Ireland was held at the University of Oxford on 10-14 July 1978. We are indebted to
the many people who were responsible for the success of both the scientific and social programs of the Conference.

About 320 participants from 33 countries enjoyed 150 scientific papers presented in seven technical sessions. Poster sessions such as have been initiated recently at other international meetings were held for the first time in the history of International Clay Conferences. Generally speaking, the 65 posters were successful and some were outstanding, achieving a clear and thorough presentation. In comparison with a conventional lecture, the efficiency of a poster is in many respects higher. It allows ample time to discuss problems in details and tangible documentation is more convincing than transient slide projection. Certainly, posters were highly appreciated by many participants. Publication in the Conference Proceedings was open to both oral and poster presentations.

Each technical session began with a chairman's address; these exhibited a variety of approaches. As usual, the time for discussion was often too short due to the length of author's presentations. A complex time schedule was rigorously maintained and all participants had excellent facilities for personal contacts in lobbies as well as sufficient time for visiting the ancient city of Oxford with its famous University.

R.A. Künnel

Scientific sessions

The scientific sessions of the 6th International Clay Conference were held in the Department of Zoology of the University. A short indication of the contents of each session is given below. The numbers in brackets indicate the number of papers presented in oral and poster sessions, respectively.

Section 1 (17/9) dealt with the crystal chemistry and structure of layer silicates. Most of the papers were concerned with the structure of micas, smectites and vermiculites. The presentation also included the application of spectroscopic techniques (IR, Mössbauer and visible absorption spectra) and the measurement of diffraction on an absolute scale.

Section 2 (32/14) included reports on the colloidal properties and surface chemistry of clays. The interaction between clay surfaces and water, organic molecules, organo-metal complexes and inorganic cations were discussed, and also the properties (structure, mixed-layer formation, rheology) of clay suspensions.

Section 3 (23/8) was devoted to geology and sedimentology. Results on the occurrence, diagnosis and metamorphism of clay minerals in nature were reported.

Section 4 (23/10) dealt with genesis and synthesis. Presentations included the (trans)formation of clay minerals in soils, alterations of rocks and minerals (by hydrothermal activity, weathering, etc.) and the synthesis of clay minerals in laboratory experiments.

Section 5 (11/7) was concerned with applied clay mineralogy. The applications discussed covered a wide area, ranging from the manufacture of porcelain and alum to the uses as catalysts, purifiers of water, drilling muds, etc. In addition, some of the papers dealt with properties of clays in situ, e.g. their filtration properties and plasticity.

Section 6 (15/7) included presentations on non-crystalline and accessory minerals. Reports on the lattice expansion of lepidocrocite and brucite, the formation and structure of aluminium hydroxides, Al-oxides, allophane, imogolite, agakanérite, were the main topics.

Section 7 (21/7) held in conjunction with the IGCP Working Group on Genesis of Kaolins was devoted to methods of kaolin investigation. Besides papers on methods (principally XRD and spectroscopic techniques), quite a few papers were presented on the mineralogy and formation of kaolinite deposits.

Social programme

The social programme of the conference was excellent. It included, inter alia, a reception by the Lord Mayor of Oxford, a choral concert by the London Welsh Male Voice Choir and Soloists, and a visit to Blenheim Palace and Gardens (birthplace of Sir Winston Churchill). The Conference Banquet at Woburn Abbey was the highlight of a full social programme.

The Organizing Committee can indeed look back on a conference which was very successful from a technical, scientific and social point of view.

A. Breeuwsma

Report on the General Assembly


The following members were nominated by the Council and elected by the General Assembly:

President: Dr. R.C. MacKenzie: The Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen AB9 2Q7, Scotland, UK
Vice-President: Prof. Dr. A. Weis: Institut für Anorganische Chemie, Universität München, D-8000 München 2, German Federal Republic
Secretary General: Dr. A. Breeuwsma: Netherlands Soil Survey Institute, P.O. Box 98, 6700 AB Wageningen, The Netherlands
Treasurer: Dr. H. Kodama: Chemistry and Biology Research Institute, Tokyo, Japan
Past-President: Prof. S.W. Bailey: Department of Geology and Geophysics, University of Wisconsin, 1215 E. Daytonstreet, Madison, Wisconsin 53706, USA
Editor-in-Chief: To be filled

Council Members: Dr. J. Chaussidon 1: Station de Geologie du Sol CNRA, Route de Saint-Ours, 7800 Versailles, France
Prof. J. Konta: Katedra Petrografie na Přírodovědecké Fakultě University Karlovy, 12843 Praha 2, Albertov 6, Czechoslovakia
Mr. D. Mitchell: Watts, Blake, Bearne & Co. Ltd., Parkhouse Courtenay Park, Newton Abbot, Devon TQ12 4PS, England
Prof. M. Minato: Institute of Earth Science and Astronomy, University of Tokyo, 8-1 Komaba 3, Meguro-ku, Tokyo, Japan
A number of French participants of the General Assembly proposed the following motion, which was carried by a majority of attendants:

"The AIPEA at its General Assembly held on July 13th 1978 in Oxford, regrets the absence of the majority of the Soviet scientists who were expected to present communications as well as to act as chairmen at the 6th International Clay Conference".

The pertinent facts were that of the 14 papers accepted by the Organizing Committee only 2 were presented and that the chairman of the session on Crystal Chemistry and Structure was absent.

A. Breeuwsma
pennantite has Mn dominant. Secondary variations can be indicated by adjectival modifiers (those of Schaller recommended) and such variations may be either octahedral or tetrhedral. Terms such as ferroan clinochlore, magnesium chamoscite, ... indicate significant octahedralcation variations. Aluminian clinochlore would indicate a clinochlore relatively rich in Al, as in the corundophilitic of Tschernak's classification.

2. Glaucunite, celadonite
After lengthy discussion, in which inevitably questions of mineral genesis as well as mineralogy were involved, it was recommended that celadonite be retained as the end-member species with ideal composition X Mg \( \text{Fe}^{3+} \text{Si}_4 \text{O}_{10} \text{(OH)}_2 \), with a composition range tentatively taken as Si\(_4\) to (Si\(_3\) \( \text{Al} \_2\) \_2\) with a related variation in octahedral cation population. A further characteristic of celadonites is a d (060) spacing less than 1.51 Å.

Glaucunite was accepted as the name of single phase micas with tetrhedral Al greater than 0.2 and octahedral Fe\(^{3+}\) correspondingly greater than 1.2 and possibly ranging to 1.5, and with d (060) greater than 1.5 Å. Important infrared characteristics also may be useful in distinguishing celadonite and glauconite, as discussed in the forthcoming paper by Buckley et al.

In the course of the discussion it was emphasized that mineral genesis should not be taken into account in choosing mineral names. It was pointed out that many so-called glauconites are mixtures and that when a mica-like mineral is a major component they may be described as glauconitic material.

3. Nontronite and iron-rich montmorillonite
It is broadly accepted that nontronites are ferric forms of beidellite with principally Al-for-Si substitutions, and that a series exists from end-member beidellite to end-member nontronite: R\(_x\) Al\(_2\) (Si\(_4\) \( \text{Al}\_2\) \_2) \_1\_0\_0 (OH)\_2 \_ R\(_x\) Fe\(^{3+}\) (Si\(_4\) \( \text{Al}\_2\) \_2) \_1\_0\_0 (OH)\_2. In the corresponding montmorillonite series, R\(_x\) (Al\(_2\) \( \text{Fe}\_x\) \( \text{Mg}\_x\) \_Mg\(_x\) \_2\) \_2\) \_2\_0\_0 (OH)\_2 \_ R\(_x\) (Fe\(^{3+}\) \_2\_Mg\(_x\) \_Mg\(_x\) \_2\) \_2\_0\_0 (OH)\_2, the term ferrin montmorillonite will be appropriate until Fe\(^{3+}\) exceeds Al; further consideration of the ferric end-member may be necessary if minerals are found with Fe\(^{3+}\) > Al in octahedral positions.

4. Italian terms equivalent to "sheet" and "layer"
In previous nomenclature discussions attempts have been made to define plane, sheet and layer as used in relation to phyllosilicates; plane of atoms, tetrhedral, octahedral, or interlayer sheet, and layer, an arrangement comprising tetrhedral and octahedral sheets.

The following were suggested as suitable Italian terms: 'strato' for 'sheet'; 'paccoetto' for 'layer'; communicated in writing by Dr. Emilio Galan.

Field trips E 2 and E 4 (Scotland)
One of the field excursions arranged before and after the 6th International Clay Conference went to Scotland. The 33 participants of the post-conference tour had a very pleasant time and enjoyed much better weather than the members of the pre-conference trip. Each participant was provided with a well-documented Guidebook showing all sorts of relevant information including geology, mineralogical data, site description, historical notes, etc.

The third day we visited the departments of Soil Survey, Spectrochemistry and Pedology of the Macalay Institute for Soil Research in Aberdeen. The members of the group were highly impressed by the high standard of the equipment, techniques and workers of this well-known Institute.

Unfortunately, we had only half a day. It took the whole afternoon to travel by coach from Aberdeen to Edinburgh. In the evening we were guests of the Institute of Geological Sciences in Scotland. The reception and tour of the House were highly appreciated by the group.

The fourth field trip, under the leader, Mr. S.K. Munro (IGS, Scotland) took us to the bauxitic clays of Ayresdale. The clay is Carboniferous in age, is composed mostly of kaolinite and is used chiefly as a source of alum in the manufacture of alum. The clay was well exposed in the two quarries visited. It was demonstrated that the bauxitic clay is a seatearth related to the overlying coal. It is believed that the clay was formed by pedogenesis under tropical conditions.

The morning of the fifth and last day was spent examining the Carboniferous and Upper Old Red Sandstone rocks in the Gargunnock Burn Section (leader: Mr. M.A.E. Browne, IGS, Scotland). The last official stop was made in the afternoon at an exposure of Carboniferous mudstones near Linlithgow, where the material is worked as fireclay.

At the end of this report I should like, again, to thank the organizers,
and in particular the leaders, for the work they did in arranging a very successful tour:

A. Breeze

Field trip E 5 (English Midlands)

Began at Oxford — and went to Bath — further to the Staffordshire Potteries — to the southern Pennines in South Yorkshire and Derbyshire — to the gypsum deposits at Newark on Trent in Leicestershire — and finally at the Jurassic ironstone deposit at Corby.

The small number of participants — there were only six of us, although representing four continents — made a minibus more convenient, driven by our excellent courier the two Dave — Highley and Morgan from IGS. The fieldtrip was well balanced between the geology and mineralogy of various industrial raw materials, their processing in modern plants, examples of land restoration, and cultural and tourist stops.

Sunday: Dr. Brian Hawkins from Bristol University conducted us around the Bath area, where he demonstrated the general geology of the Mendips and showed us some engineering geology problems, pointing out especially the many landslips induced at the level of the Fuller’s Earth Formation. We “forced” the gate to the closed road along the Avon gorge near the Clifton Suspension Bridge (Bristol) and saw the extensive work in progress to remove the hazardous rocks along the road. We visited the celestite deposits at Yate and everyone was eager to increase his collection with some good crystals. The day included a visit to the birthplace of English geology “the house of William Smith at Tuching Barn”.

Monday: Fullers earth deposits occur in the Bath area and are worked by one underground mine. We had the opportunity to visit the mine and collected bentonite samples from sections that had not been exposed to the open air. Mr. Merriman helped to guide us. We left Bath for the North and on the way, Dave Morgan showed us the K-bentonite locality at Woodbury quarry. The beds were folded and were in a vertical position.

Night spent at Keele University.

Tuesday: Visit to the laboratories of the British Ceramic Research Association at Stoke on Trent, where Mr. Howells took us around and gave us some idea of the variety of work which the Association carries out. For those who have not come across a Minton plate of English bone china, a visit to the Doulton factory at Stoke on Trent is recommended. A plate may go through 9-11 stages of heating, in addition and there is no chance to buy any second class items. Likely customers are to be found among the oil sheiks. We were close enough to the Welsh border to allow an evening excursion to Llangollen with its impressive aqueduct over the river Dee.

Wednesday: Back to geology under the guidance of Mr. P.S. Keeling. We went to the Keele quarry where the carboniferous Etruria marl is well exposed. At present the adjacent plant mainly produces tiles, and raw materials are brought in from other quarries. Blending, to get a consistent composition, is carried out by making beds of horizontal layers of the different raw materials and then working a bed vertically. The tiles seem to be a popular roofing material at present in Belgium and Holland, to which countries a large part of the production is exported. Off to the North. A short visit to a big limestone quarry at Doveholes to see evidence of Visean volcanic activity, a volcanic ash transformed into mixed-layer illite-smectite. Weather far sunny. It was cold and windy with showers when Mr. Ashby from the Hepworth Iron Co. took charge of the party and showed us the geology of the mudrock sequences used in the manufacturing of large sized vitreous clay (VC) pipes. The pipes seem to suit the climate of the Arabian oil-producing countries. At the high tea that warmed up our frozen bodies, some newly produced maps were demonstrated, on which both the surface and subsurface geology, obtained by drilling, was shown. Night spent at Ranmore Hall, Sheffield University.

Thursday: Mr. I.P. Stevenson (IGS), our specialist leader, took us on a winding road that had suffered badly from landslips to have a look over Edale Valley. We were close to a region where in Roman times lead was extracted from veins (Odin vein to mention one) in the carboniferous limestone. The walls often show fluorite replacement and the area is well known for the ornamental variety of fluor spar known as “Blue John”. Barite is also common. Similar mineralization was met at the quarries of the Hope Cement Works, where Dr. D.P. Jeffer sen took over the guidance. Impressive scars in this hilly area gave us an idea of the scale of production, and also gave us a good opportunity to study the geological sequence. The quick tour through the works was also interesting, especially for a laboratory person used to green sheets. Storage, mixing and blending of the raw materials was impressive, as was also the whole cement manufacturing process.

Interesting from the geological viewpoint but giving problems during quarrying were the signs of contemporaneous volcanic activity, such as a tuff altered to smectitic clay. The drilling results as shown by Dr. Jeffer sen gave us an idea of the extension and the directions of the connecting vents.

We left the Pennines and headed for the gypsum deposit at Newark on Trent. Although on quite a different scale, the similarity between the gypsum seams and those of celestite that we had seen earlier on the excursion was striking. Good profiles of the Keuper Marl were seen in the working quarries. We also looked over large areas of restored land and it seemed that the reworked soil gives better crops than the unworked parts. Night at Crown hotel at Oakham.

Friday: Jurassic Northampton Sand Ironstone at Corby. As at the gypsum works, “strip mining” is used. At Corby big “walking dragline” machines do the job with a bucket capacity of about 20 m³. The minerals of the iron ore are chiefly siderite and chamosite of oolitic character. All the ore is processed at the Corby works. At present the quantities extracted amount to 2-3 million tonnes a year. As soon as an area is worked, it is reinstated and in addition to agricultural use the landscape can be turned into recreation areas with golf courses, fishing pools and woods. Experiments are also carried out to restore the land for industrial purposes and also for residential development.
After a very interesting week we returned partly by the old Roman road (Ermine Street), now a dual carriageway to London, to find ourselves meeting the Friday afternoon traffic. Full of impressions and of gratitude to our couriers we all dispersed. By the time of the next AIPEA conference I presume that we all shall have studied the samples collected and have data to compare.

Ann Marie Bruzewitz

A postscriptum from our Canadian member

Participants on the 95 field trip to the Midlands sought geologic information during the day and the products of the brewer's art at the evenings. Some participants acknowledged the Campaign For Real Ale (C.F.R.A.) supporters by consuming, whenever available, these products brewed and dispensed by traditional methods. One member was searching byproducts could be registered during a breathalyzer test). A beer-lemonade mix guaranteed to burst one's bladder before any alcohol byproducts could be registered during a breathalyzer test). The consensus at the conclusion of the week-long lunch and evening sessions is that the English pub is quite a civilized establishment, the C.F.R.A. supporters have a worthy cause, one man's cold beer is another man's not so cold, and each participant has at least one more friend in five foreign countries.

D. Scala

1981 International Clay Conference (Italy)

The Council of the Italian Group of AIPEA and the Organizing Committee of the "1981 International Clay Conference" (General Secretary: Prof. F. Veniale, Institute of Mineralogy and Petrology, University of Pavia, via Bassi 4 - 27100 Pavia - Italy) announce the preliminary program of the "1981 International Clay Conference":

- **7-8-9th September**: Bologna: opening and scientific sessions half-day excursion: clay quarries and ceramic factories in the Sassuolo district, School and museum of ceramics in Faenza.
- **10th September**: Milan (Metanipolli): visit to laboratories of E.N.I. (Italian National Oil Company) scientific sessions (School of hydrocarbons).
- **11th September**: Pavia: scientific sessions, general assembly of AIPEA, closing session.

Two simultaneous excursions (both pre- and post-Conference), 4-5 days:
- (A) Sardinia island and Central Italy (end in Rome) are organized, with visits to keolins, bentonite, talc, refractory clay, alunite (volcanic), halloysite 4H2O occurrences and deposits, "terra rossa" soils, Flysch and diatomaceous-lacustrine sediments, marls with palygorskite, "varicolored clays" with dickite, palagonitic and zeolitic tuffs, solfataras, Etna and Vesuvius volcanoes. Famous places of touristic, historical and artistic interest will also be visited.

**Recent Deaths**

Dr. J. Chaussidon

The French Clay Minerals Group is sorry to announce the death of its President, Jean Chaussidon on September 9, 1978.

Jean Chaussidon was born in Paris on March 13, 1931. He pursued his secondary education during the period of 1942-1950 at the “Lycée Buffon” after which he attended the “Lycée Saint-Louis”, also in Paris, to prepare for the entrance examination to the National Agronomical Institute. He studied at this institute between 1951-1954 when he received the degree of Engineer in Agronomy with a specialization in physical chemistry. From 1953 at 1955 he completed his scientific training receiving a "Licence" in Natural Sciences at the Faculty of Sciences in Paris and joined the National Center for Agronomical Studies (C.N.R.A.) in Versailles. In 1961, he received the Ph.D. degree, the subject of his thesis research being the "Study of the Ionic Environment and of the Electrochemical Properties of Surface of Clay Suspensions".

In addition to this brilliant scientific career, Jean Chaussidon assumed in 1974 a demanding responsibility as the head of the Soil Sciences Department of C.N.R.A. There he proved to be a capable research director and scientist, broadening his interests outside the general problems of soil science.

The quality of his work was acknowledged by numerous awards prominent among which was the distinction of being invited to hold the Franqui chair at the University of Louvain in 1977.

All those who have known him were impressed by the depthness of his intuition and the rigor of his scientific approach. He was a man of good will and a fine human being.

J.J. Fripiat

Prof. J. Orcel

Hommage a Jean Orcel qui le premier assura la présidence du Groupe Français des Argiles.

Le 27 Mars dernier, au lendemain de Pâques, s'était éteint brusquement Monsieur Jean Orcel, Membre de l'Institut, Professeur Honoraire au Muséum National d'Histoire Naturelle.

Pour ses collègues, ses Collaborateurs, ses Elèves et ses Amis, cette disparition soudaine a été ressentie avec une très vive émotion. Un grand nombre d'entre vous l'ont bien connu car Monsieur Orcel a toujours manifesté le plus grand intérêt pour les recherches dans le domaine des
Remarquable et il a suivi nos réunions pendant de nombreuses années.

Né à Paris le 3 mai 1896, c’est dans cette ville qu’il passa toute sa vie. En 1920 il devint préparateur de Minéralogie au Muséum, dans la Service du Professeur Alfred Lacroix. C’est dans ce Laboratoire que se déroula toute sa carrière. En 1932, il en devint sous-directeur, puis directeur lors de la retraite du Professeur Lacroix, alors Secrétaire Perpétuel de l’Académie des Sciences.

Je rappellerai que c’est en 1963 que Monsieur Orcel fut élu membre de l’Institut où il succédait au géologue Charles Jacob. Sa contribution à la Minéralogie fut très importante. Je soulignerai tout d’abord qu’il a eu le grand mérite d’introduire dans l’étude des minéraux, la rigueur des techniques, physiques et la précision des méthodes chimiques que d’ailleurs il a lui-même perfectionnées.

C’est tout d’abord à l’étude d’une famille de silicates hydratés: les chlorites que consacrées ses premières recherches. Il s’agissait de déterminer les relations entre les propriétés optiques et la composition chimique, de rechercher les faits expérimentaux permettant de vérifier les hypothèses faites sur leur structures en confrontant les analyses chimiques et les schémas structuraux imaginés pour représenter leur constitution.

En ce qui concerne la composition chimique, il a été l’un des premiers à saisir l’importance du rôle de l’eau dans les silicates ce qui l’a conduit à en préciser le dosage ainsi que la température de déshydratation qui lui est apparemment significative d’une espèce donnée. Il a fait appel à une méthode alors récemment mise au point par Saladin et Le Chatelier pour les besoins des métallurgistes: l’analyse thermique différentielle.

A côté de ces résultats spécifiques, il faut souligner la qualité des données analytiques qui font que son œuvre est encore d’actualité.

En utilisant les rapports des principaux éléments chimiques, il avait établi une classification des chlorites. Celle-ci s’est d’ailleurs trouvée confirmée ultérieurement en partant de la constitution cristallochimique déduite de la structure, lorsque en collaboration avec Monsieur Bénin et moi, nous avons proposé un nouveau classement de ces silicates.

À partir de 1945, bien qu’absorbé par de multiples tâches en particulier l’organisation des premières prospections de minerais d’uranium en France et dans les territoires d’Outremer, il a néanmoins participé aux travaux de l’équipe que Monsieur Bénin et moi avions constituée dans son Laboratoire. Après avoir très brièvement rappelé les principaux travaux de Monsieur Orcel, je voudrais indiquer le rôle important qu’il a eu lors de la constitution de Groupe Français des Argiles.

Notre Groupe fondé en 1947 a confié la présidence au Professeur Orcel, poste qu’il a conservé jusqu’à ce que notre Groupe ait une présence officielle étroitement liée à l’CNRS en tant que membre de la Commission des Argiles (en 1954).

Je rappellerai également que pendant les années 1951 et 1952, Monsieur Orcel succédant à Monsieur Bénin a été élu Président de la Commission Internationale pour l’étude des Argiles (CIPEA) devenu actuellement l’AIPÉA. La vitalité de ces organismes fait honneur à leurs fondateurs et je crois qu’il était utile de montrer le rôle qu’y a joué Monsieur Orcel. Nous conservons de notre premier Président, l’un des fondateurs, le souvenir d’une personnalité dont le rôle a été tout à fait déterminant pendant plusieurs années pour la constitution et la survie de Groupe français des Argiles et de notre Association internationale. Je me dois également de rappeler les qualités humaines de Monsieur Orcel: amabilité, courtoisie et bienveillance qui ont imprégné le caractère amical qui constitue encore un des attraits de nos réunions. C’est donc bien sincèrement que notre Groupe associe ses très vifs regrets au deuil de sa famille.

Mlle Simone Caillère

Fourth meeting of the European Clay Groups
Munich, 8-10 September 1980

In 1980 the fourth meeting of the European Clay Groups will be held in Munich at the invitation of the "Deutsche Ton- und Tonmineral-Gruppe" (DTTG), under the auspices of the Association Internationale pour l'Etude des Argiles.

Munich, the capital of Bavaria, is a city of 1.3 millions of inhabitants.

Many buildings of historic and architectural interest, world-famous museums and theatres, and most of all the Bavarian joy of living has given Munich the title "secret metropole of Germany". Munich is directly connected with most of the European metropoles by air and railway service.

The two Universities will give a useful base for a productive meeting.

Scientific Programme:
Two or three days will be devoted to scientific sessions and discussions.

The sessions will cover all aspects of clay mineralogy and investigational techniques. Field excursions will be arranged to deposits of kaolin, clay, bentonite, and to characteristic soil profiles in Eastern Bavaria.

Further informations will be released in the first circular in the spring of 1979.

President of DTTG: K. Jasmund
Local Organising Committee: H. Köster, U. Schwertmann, A. Weiss.

ICGP Working Group on Genesis of Kaolins
1978 Scientific Annual Report by Dr. Miloš Kuřáv (secretary of the Working Group), Institute of Geological Sciences, Charles University, 128 43 Praha 2, Albertov 6, Czechoslovakia.

The 9th International Kaolin Symposium took place in Oxford during the 6th International Clay Conference of AIPÉA (July 10-14, 1978). Fifteen papers were presented in two sessions.

Subjects discussed included methods of prospecting for kaolin deposits, economic kaolin deposits in Australia and South Africa, tonstein in Australia and Tertiary coals in western U.S., kaolin beneficitation, and the mineralogy, chemistry, and ceramic properties of kaolin. The papers will be published in the proceedings of the 6th AIPÉA Conference.
Federla Republic of Germany and the Federal Republic of Austria was held July 15-22 following the meeting at Oxford. The excursion was organized and led by Prof. Köster of West Germany and Prof. Wieden of Austria. Twenty-four people attended. Virtually all major kaolin and ball clay deposits in West Germany and Austria were visited. The deposits observed are in the regions of Frankfurt, Aschberg (Bavaria), and Regensburg, West Germany, Salzburg, Linz, Wachau and Vienna, Austria. A discussion of the scientific aspects of the kaolin deposits visited was held at the Institute of Geotechnics, Vienna, on the last day of the excursion.

All participants of the excursion were given two geologic guides - to kaolin deposits of West Germany (author: Prof. Köster; 20 pages, 2 maps) and Austria (author: Prof. Wieden; 18 pages, 3 maps).

Three meetings of the executive Committee of the Working Group were held. One was at Oxford University, July 12, 1975, and two during the field excursion that followed the Clay Conference. Dr. H.H. Murray co-U.S.-member of the Committee served as chairman of all three meetings in the absence of the Secretary, Dr. Miloš Kuťáček of Czechoslovakia, who was unable to attend. The principal matters discussed were the present state of affairs and plans for the future of the Working Group.

Members of the Executive Committee and others of the Working Group attending the meetings were the following:

++ Dr. J. Bondam, Denmark
++ Dr. F. Chukhrov, U.S.S.R.
+ Dr. E.C. Freshney, U.K.
+ Prof. J. Estoule, France
+ Prof. F. Keller, U.S.
+ Dr. H. Koster, West Germany
+ Dr. H. Kromer, West Germany
+ Dr. H. Minato, Japan
+ Dr. M. Patterson, Denmark
+ Dr. S. Patterson, U.S.
+ Prof. M. Storr, West Germany
+ Dr. W. Keller, U.S.
+ Dr. H. Koster, West Germany
+ Dr. H. Kromer, West Germany
+ Dr. M. Storr, East Germany
+ Dr. S. H. Patterson, USA
+ Prof. H. Minato, Japan
+ Dr. W. Keller, U.S.
+ Dr. E. Galan, Spain
+ Prof. F. Loughman, Australia
+ Prof. P. Pattison, U.S.
+ Prof. M. Kuťáček, Czechoslovakia
+ Prof. S. Bondam, Denmark
+ Prof. H. H. Murray (USA), Prof. M. Storr (secretary, Czechoslovakia)
+ Prof. P. Pattison, U.S.
+ Prof. M. Kuťáček (secretary, Czechoslovakia), Prof. G. Lombardi (Italy), Prof. F. Loughman (Australia), Prof. H. Minato (Japan), Prof. H. H. Murray (USA), Prof. J. Neubil (Czechoslovakia), Dr. S. Patterson (USA), Prof. V. F. Petrov (USSR), Prof. M. Storr (DDR), Prof. P. Wieden (Austria).

Activities foreseen for 1979 and 1980

1979 (September) 10th Kaolin Symposium and field investigation of kaolin deposits in Hungary (3 days, leader Dr. G. Varju), and Romania (5 days, leader Dr. S. Radan).

Proposed programme of the symposium:
1. Regional contributions on kaolin deposits
2. Methods of kaolin investigation
3. More information write to the secretary (before February 15, 1979), who will answer himself or forward the letters to Dr. Varju and Dr. Radan.

1980 11th Kaolin Symposium preceding the 26th International Geological Congress (organized by Prof. Estoule, Rennes), with an excursion (6 days).

Scientific progress achieved during 1978:
1. Study of kaolins by means of Raman spectra and Mössbauer method
2. Study of crystalinity, magnetic properties and trace elements of kaolins
3. Technology of kaolins and paper coating kaolins
4. Criteria for distinguishing of hydrothermal from weathering kaolins
5. New data on kaolin deposits of South Africa and Australia.

Publications


1978 Administrative Annual Report
China and Sweden expired wish to cooperate in Project no. 23, bringing thus the number of countries cooperating in the Project to 40.

Prof. Wieden - organizer of the excursion to Austria - was co-opted to the Executive Committee.

The Commissioner of the Geol. Survey of Guyana appointed Mr. J. Ghansah and Mr. D. Dublin as representatives of Guyana in the Kaolin Programme. In a letter from January 24, 1978, Professor Störk directed attention of the WG to the fact, that Rep. of South Africa, Rhodesia and Taiwan are not members of Unesco, and cannot therefore cooperate in an Unesco programme as regular members. In accordance with the advice of the Secretary General of IUGS (letter dated Nov. 11, 1977, ref.No. K.M.XIII.23/vdh/maj), the EC of the IUGS WG No. 23 Genesis of Kaolins is to be considered the IUGS WG No. 23 proper and all other members of the WG outside the EC are since now WGs' correspondents, and - if participating in Symposia - observers. The Members of the Working Group: Dr. J. Bondam (Denmark), Prof. F. Chukhrov (USSR), Prof. J. Estoule (France), Dr. E.C. Freshney (UK), Prof. Emilio Galan (Spain), Prof. H.H. Köster (FSG), Prof. M. Kuťáček (secretary, Czechoslovakia), Prof. G. Lombardi (Italy), Prof. F. Loughman (Australia), Prof. H. Minato (Japan), Prof. H.H. Murray (USA), Prof. J. Neubil (Czechoslovakia), Dr. S. Patterson (USA), Prof. V.P. Petrov (USSR), Prof. M. Störk (DDR), Prof. P. Wieden (Austria).
The Secretary established contact with the Working Group on Laterites of the International Association of Geochemistry and Cosmochemistry, and with the IGCP Working Group No. 160 Precambrian exogenic processes. Everybody interested in cooperation with these two groups should inform the secretary. Proposal for cooperation with IGCP, working group Laterites, to plot the intensity of recent kaolinization and lateritization against the ancient one and to try to explain his differences. Proposal for cooperation with WG No. 160: the study weathering processes in the Precambrian (lateritization versus kaolinization or other processes), the study of metamorphosed weathering crusts included.

The proceedings of the 3rd Kaolin Symposium (Exeter, Rennes 1974) will be published early next year.

Proceedings of the 5th International Kaolin Symposium can be ordered by sending a cheque for the amount of 20 dollars (Europe) or 25 dollars (overseas) to the adress: Servicio de Publicaciones del Ministerio de Industria, Calle Claudio Coello 44, Madrid-1, Spain.

Prof. Minato (Japan) was asked to represent the group on the 3rd Regional Conference on Geology and Mineral Resources of Southeast Asia, and to contact possible co-workers on the monograph Kaolin, volume II, part Far East.

The Group was kindly supported by a Unesco grant which was used for cover the cost of the excursion to West Germany and Austria for 7 members of the Executive Committee.

Training opportunities in 1978-79 were offered by the Charles University, Prague, to one graduate student from Greece.

NATO Advanced Study Institute
A NATO Advanced Study Institute on Advanced Chemical Methods for Soil and Clay Minerals Research will be held July 23 to August 4, 1979, at the University of Illinois, Urbana, Illinois, USA.

This two-week Institute will address the theory and applications of Mössbauer spectroscopy, electron spin resonance (ESR, EPR), x-ray photoelectron spectroscopy (XPS, ESCA), nuclear magnetic resonance (NMR), and neutron scattering to soil and clay mineral systems. Nine internationally prominent scientists will be present to lecture and to share their experience in using these advanced spectroscopic techniques to characterize soil and clay systems. The Institute is being directed by Dr. J.W. Stock and Dr. W.H. Banwart, Department of Agronomy, University of Illinois.

For brochures and application information contact Carol Holden, Conferences and Institutes, 116 Illini Hall, 725 S. Wright Street, Champaign, Illinois, USA, 61820. Telephone 217/333-2883.

Application deadline is March 30, 1979. Anyone interested in these topics is eligible to apply. Applications are especially encouraged from interested persons in all NATO countries, although members of non-NATO countries are also welcome.

National Clay Groups

Czechoslovakia (CSSR)

The 33rd meeting of the Group was held on November 15th, 1977 and had the following program:

B. Krelina, V. Milicky: The Karlovsky Vary kaolins
J. Konta: News in clay mineralogy and petrology.

A special meeting of the Organizing Committee of the 7th CCMP was held in September, 1978, and discussed the organization of the 8th Conference on Clay Mineralogy and Petrology in Czechoslovakia which will be held in October, 1979, in Teplice (Spa) in northern Bohemia. Excursions to bentonites and hydrothermal clay associations connected with cassiterite, molybdenite and wolframite and to a historical mineral collection in Teplice Town Museum are planned.

The 34th meeting of the Group was held on November 30, 1978, with the following program:

I. Kraus: Genetic conditions of clays in Western Carpathians.
J. Konta: Dynamics of the genesis of clay minerals in soils and their further evolution in sedimentary lithosphere.

All meetings of the Group were held in the Department of Petrology, Charles University, Prague.

J. Konta

France
The "Groupe Français des Argiles" had two meetings in 1978, one on March 21 and one on November 28. The programme of these meetings included the following presentations:

March 21:
R. Prost et P. Cambier: Étude de la structure des agrégats de kaolinite associée ou non à des oxyhydroxydes de fer.
F. Weber et F. Gauthier-Lafaye: Argiles associées aux réacteurs naturels d'Oklo (Gabon).
J. Louail: Origine et signification des zéolites dans les dépôts ceno-
J. Konta: New facts in clay mineralogy and petrology.

November 28:
Hommage au Président honoraire Jean Orcel: S. Caillere.
Hommage au Président Jean Chaussidon: J. Frépied
R. Frost: Application de mesures de perméabilité à l'étude de la structure des gels d'argile.


P. Chassin et B. le Berre: Influence des substances humiques sur les propriétés d'hydratation des argiles-V. Déshydratation des acides humiques.

R. Calvet et M. Terce: Influence de l'acidité sur l'adsorption de la terbutrynne par une montmorillonite calcique.

I. Eger, M. Cruz et J. Fripiat: Grandes thermodynamiques et caractéristiques spectroscopiques de l'eau adsorbée par les argiles.

F. Bergaya, M.L. Gatinou, M. Cruz et M.J. Fripiat: Distinction entre la surface externe et la surface interne de la montmorillonite par des méthodes d'adsorption de l'éthanol et d'isopropanol.


M.C. Briano, D. Jordan et A. Kalt: Deux nouveaux types de feuilles siliciques rencontrés dans des silicates de cuivre et de sodium.

J. Guignard et H. Pezerat: Interactions entre montmorillonites et cryptophyllites.

M.C. Bonhomme: Géochimie isotopique de l'argon et évolution de l'argon dans des argiles.

L. Gruner, R. le Dred et R. Wey: Etude de l'échange d'ions sodium-alkylammonium dans une vermiculite.

The French group will held two sessions in 1979:

27th of March 1979:
Properties and use of non heated clay minerals
a) Clay minerals in soil mechanics (fondation and stabilization)
b) Clay minerals used as filler in polymers and rubber products
c) Drilling muds

13th of November 1979:
Comparison of surface properties of clay minerals and zeolites.
This session will be combined with la Société Française de Minéralogie.

For three years, the French council has designed Dr. Henri Fontet (Université Pierre et Marie Curie) as President of the French clay group, Dr. Cyril Tchoubar (University of Orleans-La-Source) as Vice-Président, and Dr. Hélène Suquet as a secretary of the French clay group and as the French liaison-officer of the AIPEA.

H. Suquet

German Federal Republic
The German Clay and Clay Minerals Group held its 1977 meeting in Kiel on the 7th October. It was a joint meeting with the Working Group "Ion exchange" of the German Colloid Society. The 12 papers red dealt with this general subject.

The next meeting of the group will be performed in connection with the 5th meeting of the European Clay groups. This conference will be in Munich during the last week of August 1980. Field trips will be arranged after the sessions in Munich.

Activities of the German Clay and Clay Minerals Group have been the arrangement of a trip field of the Working Group "Genesis of Kaolin" of

IGCP. This field trip took place after the 1978 International Clay Conference (Oxford) and various kaolin- and other clay deposits were visited.

F. J. Eckhardt

Great Britain
Clay Minerals Group of Great Britain and Ireland

A meeting of the Clay Minerals Group on "Particle Size, shape and fabric of clays" was held on November 10, 1978 at the Royal Entomological Society London. About forty members attended. The following papers were given:

The LADAL disc centrifuge: T. Allen (University of Bradford)

The morphology, nature and origin of deposits in tile drains: W.J. McKardy and E. Paterson (Macaulay Institute for Soil Research, Aberdeen)

The effect of irreversible shear breakdown of montmorillonite aggregates on the development of physico-chemical properties: D.J. Morgan (Institute of Geological Sciences, London)


Fore structure of clays: G.P. Lawrence, D. Payne, D.J. Greenland and C.J.S. Watt (University of Reading)

Some thoughts on interstratified clay minerals: A.H. Weir and J.R. Rynner (Hothamstead Experimental Station, Harpenden)

Following the meeting the Annual General Meeting of the Group was held. The following committee were elected to serve for the coming year:

Chairman: Dr. A.H. Weir
Secretary: Dr. M.J. Wilson
Treasurer: Dr. I.R. Basham
Principal Editor: Dr. J.L.M. Lambert
Committee Members: Dr. P. Bullock, Dr. P.S. Cundy, Prof. F. Hodson, Dr. A. Parker, Mr. J.A. Bain, Dr. D.A. Spears.

Spring Meeting, 1979
The next Group meeting will be held on Friday 6 April, 1979 at the Geological Museum, South Kensington, London. The topic of "The chemistry of clays and associated minerals" is a wide ranging one and would allow for the inclusion of short progress reports on current research, it is intended to open the programme with an invited lecture.

Offers of papers should be forwarded as soon as possible to the new Group Secretary, Dr. M.J. Wilson, The Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen AB9 2QJ, Scotland.

Autumn Meeting, 1979
It is intended to arrange the Group's autumn meeting in conjunction with the Fourth Meeting of the Geological Societies of the British Isles. This will be held in Sheffield from 19-22 September, 1979. Papers will be devoted to aspects of the geology and mineralogy of clays.

Hungary
On Sept. 19-23, 1977 a course on "Laboratory methods of investigation
of clay minerals, Part II" was held at Visegrád near Budapest. The following methods were discussed: X-ray diffraction, thermal analysis, thermo-gas titrimetry, IR-spectroscopy, electron microscopy, studies with polarizing microscope, rheological methods of investigation.

Papers presented on the regular sessions of the Clay Minerals Group in Budapest:

1977 October:
Gottardi, G., Italy: Sedimentary zeolites in Europe.
Viczián, I.: Contribution of the clay mineralogy to the paleography of the Eckeme of the Bakony Mts.
1977 November:
Dudich, E.: Adsorption of carbamate-type herbicides on the muds of the Ticza river.

Italy

An International Meeting on Bentonites has been held in Sassari and Cagliari (Sardinia Island) from 9 to 13 October 1978, organized by Prof. A. Pietracaprina (Institute of Geology and Mineralogy, Agricul-

ture Faculty, University of Sassari), with about 90 participants from Italy, Czechoslovakia, France, Germany, Great Britain, Greece, Japan, Netherlands, South Africa, Spain, USA, USSR and Yugoslavia. Prof. R.E. Grim (Urbana, Illinois - USA) delivered a general lecture "Map of bentonite deposits in the world". An essential bibliography on Italian bentonites and 15 papers have been presented.

Two days field excursion reached the main bentonite deposits in Sardi-

nia, and some processing plants; moreover, places of geological and historical interest.

Prof. J.J. Fripiat (Orleans, France) delivered lectures on "Relations entre défauts et propriétés des surface des argiles" on the occasion of the Congress of the Ital. Assoc. of Crystallography (Parme, November 1977), and "Surface properties of zeolites" in Naples (November 1977), invited by Prof. A. Pozzuoli (Institute of Mineralogy). Prof. U. Schwertmann (Munich, Germany) delivered a lecture "Oxides-hydroxides of iron in sediments and soils" (April 1978) invited by Prof. Mrs. A. Arduino, Institute of Agricultural Chemistry, University of Turin, on behalf also of the Ital.Soc.for Soil Science.

A meeting on "Relationship between mineralogical, physico-chemical properties and geotechnical behaviour of clays" will be organized by Prof. F. Veniale (Institute of Mineralogy and Petrology, University of Pavia) during the last week of May 1979: some distinguished scientists from France and Czechoslovakia have been invited for delivering general and introductory lectures.

F. Veniale

Japan

Annual reports of activities in clay research in Japan (1975 and 1976) were presented to the News letter of March 1977 by Professor T. Sudo. This is the report of that in 1977.

Clay Science Society of Japan.

The 21st General annual meeting (1977) was held at the Government Industrial Research Institute, Nagoya from November 8 to 10 with one day's field excursion to sedimentary kaolin deposits and a ceramic factory in northern Nagoya. About 45 papers on general subjects were presented and two special lectures were delivered:
1. Mechanism of crystal growth in clay minerals by Prof. I. Sunagawa (Tokohu University).
2. On "Tsumoku" porcelain cup (Special porcelain cup used for tea ceremony in Japan) by Prof. K. Yamasaki (Nagoya University).

In addition, a symposium was organized on: "Kaolin clay and its utilization".

2. Resources of Kaolinic clay in Japan by Dr. M. Fujii (Geological Survey of Japan).
3. Clay deposits in Europe and North America by Prof. U. Minato (University of Tokyo).
5. Clay and porcelain by Dr. M. Yamasaki (Nihon Insulator Co.).
6. The role of clays in refractories by Dr. T. Hayasaki (Shionogi Re-

fractory Co.).

The Sato's cooperative study project by the Science Research Fund was started on a problem of "Crystal structure and mode of formation of mixed layers in sheet silicate minerals" and a symposium was held in December 9 and 10, 1977 at Kiriu, Gunma Prefecture, and 16 papers were

H. Minato

Poland

Clay Minerals Sections of Mineralogical Society of Poland

National Conference "Clays and Clay Minerals"

The First National Conference on Clays and Clay Minerals took place in Bolesławiec, Lower Silesia, on 25-28 April 1978. It was organized by the Section of Clay Minerals of the Mineralogical Society of Poland and the Committee of Geological Sciences of the Polish Academy of Sciences in cooperation with the Technical University of Mining and Metallurgy in Cracow, Warsaw University and the other institutions. It should be emphasized that Bolesławiec was an old centre of ceramic industry and mining of kaolinite clays.

126 participants took part in the conference, including 16 from foreign countries. Among them we have to mention Academician of the USSR Prof. F.V. Chukhrkov, Dr. R.U.S. Robertson (Scotland), member of the Slovak Academy of Sciences Prof. M. Gregor, Prof. M. Störr (University of Greifswald, DDR) and Dr. G. Székhézi (representative of Clay Minerals Group of the Hungarian Geological Society).

The main problems of the conference were the mineral composition and properties of clays and kaolins and problems of their industrial utilization. Another problematic group was dealing with clay minerals of soils and their influence on fertility.

The conference was opened by plenary session with three lectures: Prof. L. Stoch "Clays and clay minerals of Poland - problems of their study and utilization", Prof. F.V. Chukhrkov "Kaolin deposits of the USSR" and Dr. R.U.S. Robertson "Studying clays for industry".


86 papers were presented.

The papers presented in section 1. were dealing with application of Mössbauer spectroscopy, EPR and Raman spectra in the study of clay minerals, quantitative X-ray analysis of clays, dilatometric investigations and methods of selective dissolution of minerals in acids. Numerous papers were devoted to mineral composition of kaolins, clay and clay shales from different deposits. The papers presented in the section of origin and geology of deposits were dealing mainly with the origin of ancient weathering crusts formed in granite and gneisses of Lower Silesia as well as with clays and shales associated with brown and pit coal.

Section of technology of clays was discussing on physico-chemical methods of purification and beneficitation of kaolins as well as on chemical activation of bentonites and the factors determining technical properties of clays and possibilities of changing them.

The papers presented in the section of complex utilization of deposits were dealing with the use of clays and kaolins in ceramics and other branches of industry. The works of the section of mineralogy of soils were devoted mainly to the mineral composition of soils within the Polish territory, particularly the morainal ones.

The participants of conference could visit specially organized exhibitions of the Polish publications on clays and clay minerals and of artistic and applied ceramics produced in the Bolesławiec region. After the scientific meetings field excursions took place to the mine of kaolinitic sands and washing-plant of kaolin in Ostryszowice near Nowogrodziec and the mine of glasswork sand in Osiecznica. The participants could also visit Miocene kaolinit clays and the brown coal mine in Turow near Zgorzelec, Miocene fireclay deposit in Jarosław near Strzegom and halloysite deposit Dzuno near Legnica, being a preserved Miocene weathering crust overlying basaltic rocks.

L. Stoch

Scandinavia

Report from the Nordic clay group

The Spring meeting 1978 of the Nordic clay group was held in Gothenburg. The main theme was related to the landslide at the close by Tuve on Nov. 30th 1977.

After an introduction of clays in West Sweden given by Dr. Curt Fredén from SGU, Gothenburg, A.M. Brusewitz showed preliminary results of an XRD study of clays from Tuve and other localities.

Professor Ewen Hanabo, Chalmers Inst. of Technology, Göteborg gave a paper on "Clay properties of importance in regard to landslide risks".

Leif Andréasson, Director of the Swedish Geotechnical Inst., Linköping gave an expose of the Tuve landslide, the course of events and measures taken afterwards.

Docent Lennart Andersson presented a paper on "Deep stabilization of clay by the lime-piller method".

An extra point on the program was a report with slides by Karl Petter Fischer and Tor Løken from the Geotechnical Institute in Norway on a recently occurred landslide at Hassa near Trondheim.

On the following day, May 10th, the participants could see the place at Tuve, where restoration is in progress. The risks for landslide along the region was pointed out by our guide for the day, Curt Fredén. About a month after the Tuve landslide a new one occurred in the small valley Bårfendal about 120 km to the North of Gothenburg. Due to heavy rains a small brook had undermined a slope. This landslide did not involve damage to people or houses. The steps, however, taken to stop further slides involved comparatively big and costly jobs, as did also the restoration after the measures taken.

The theme of the Autumn meeting (November 1978) was "Heavy metals" for good and for bad. The speakers were as follows: Björn Landqvist: Bolden Metal AB, Sweden: "Effects of heavy metal waste from the Rönskär factories".

Birger Larsen, Inst. of Technology, Lingby, Denmark: "Pretative "heavy metal"-budgets for marine sedimentation regions".

Kenneth Sjöberg, Ranstad Skifferaktiebolag, Sweden: "Total utilization of the alun shale at Ranstad" - Considerations and experiences based on the mineralogical and chemical composition of the shale".

Elen Roaldset, Inst. of Geology, Oslo, Norway: "Heavy metals - in par-
ticular the lantanides - in glacial sediments rich in clays”.

Arne Andersson, Dept. of Soil Sciences, Uppsala: “Heavy metals - occurrence and distribution in the soil”.

Göran Linder, Natural Swedish environmental protection board, Stockholm, Sweden: “Some aspects on the turnover of heavy metals in natural waters”.

The discussions were lively. Further, short glimpses were given from the Oxford conference by myself.

There were some changes in the board. Thus Per Aagard at the Norwegian Geotechnical Institute (NGI, Box 40, Ytteren, Oslo 8) has taken over the secretary post, however, backed up by the former secretary Sven small, (SGU, Box 670, 8-751 28 Uppsala, new address from Febr. 1st 1979). Bengt Åke Nystrand (Div. of Quaternary Geology, University of Uppsala, Box 555, 8-751 22 Uppsala) is the new treasurer.

The meeting started on Monday morning with a symposium on black shales; a total of 168 scientists from throughout the United States and several foreign countries met in Bloomington, Indiana, October 8-12, for the 27th Annual Clay Minerals Conference. The meeting was held in the Memorial Student Union Building on the campus of Indiana University.

The meeting started on Monday morning with a symposium on black shales; with emphasis given to the various types, occurrence, formation and chemistry. It was stressed that the shales represent a possible source of energy in the future because of their organic content. The rapid accumulation of radioactive wastes is creating a serious disposal problem. Several methods of disposal in shale beds and salt deposits were presented in a special session. A major factor clouding the issue is the vacillating position of government policy which is continually changing the direction of the various research programs.

The surface reactivity of clay minerals is an important characteristic that controls many of their chemical properties. In nature many of the clay minerals are coated with an amorphous material which can be either organic or inorganic in nature. The identification and characterization of these amorphous materials was addressed in a number of research papers.

Naturally occurring zeolites were the subject of several papers at the meeting. Their composition, physical properties and occurrence in different areas were discussed in detail. The usefulness of natural zeolites and their importance to industry is steadily increasing; however, a warning was given that shoddy research among the health and medical professions and premature release of incomplete data endangers the continued growth and use of this versatile class of minerals. It was also suggested that the same irresponsible reporting could have a similar serious effect on other clay minerals.

The highlight of the meeting was the Presidential address by Dr. John Hayes. John discussed sandstone diagenesis in great detail and related the effects of chemical and physical phenomena to the storage and production of hydrocarbons in this type of rock. The presentation was very comprehensive with several laboratory techniques being discussed, as well as how these techniques could be used effectively to aid in oil and gas production. Several hydrocarbon producing sandstones were used as examples where these techniques were successfully employed.

The meeting was concluded with a reception, sponsored by Aquafine, Inc., and banquet. Entertainment was furnished by the Singing Rossiers. This was followed on Thursday with a field trip through the beautiful Indiana countryside to visit Pennsylvania underclays and New Albany occurrences of black shale.

The Clay Minerals Society appreciates the efforts of Dr. Haydn Murray, and all those who served on the various committees, for making this meeting a success.

Ann Marie Brusewitz

USSR

In May 1978 the USSR Mineralogical Society had a Meeting in Kartsh (Krym) on general concepts of mineralogy (what is a mineral, mineral species, isomorphism, polymorphism, polytypism etc.). The IMA conference in Novosibirsk (4/10.9.1978) had topics on typomorphism and physics of minerals with a number of papers dealing with phyllosilicates and clay minerals.

In 1979 we expect a USSR Clay Conference in Vladivostok. The publishing house "Nauka" had edited in 1978 collected papers "Composition and structure of minerals as indicators of genesis". In particular there are papers on the use of crystal structure data for deduction of formation conditions of dioctahedral phyllosilicates. In 1979 a book of B.B. Zvyagin and his collaborators will be published by "Nauka", - "High-voltage electron diffraction in the study of layer minerals". It may be considered as a continuation of the earlier Zvyagin's book "Electron diffraction analysis of clay minerals" edited by Plenum-Press (New York) in 1967.

V. F. Chuchkrov

USA

Overview of the Bloomington clay minerals conference

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Wayne F. Hower and Albert C. Kunkle

Meeting announcement

The sixteenth meeting of the Clay Minerals Society and the 28th Annual Minerals Conference will be held on August 26-29, 1979 at Macon, Georgia. Three days of technical sessions including a symposium on kaolinite processing are currently planned. A two day field trip is planned with visits to the kaolin mines and processing plants of middle Georgia on Thursday, August 29, and the attapulgite - Andersonville area on Friday, August 30.

Explanatory titles of papers are due by May 1, 1979 and the deadline for abstracts in June 1, 1979. If you plan to submit a paper please submit your explanatory titles as early as possible to Dr. C.B. Weaver, Technical Program Chairman, School of Geophysical Science, Georgia Institute of Technology, Atlanta, Georgia 30332. Dr. W.E. Moody is General Chairman for the Conference. The 1980 Clay Mineral Conference will be held in Waco, Texas on October 5-8. Dr. J.L. McTee will be the General Chairman of the 1980 Conference.
ticular the lanthanides - in glacial sediments rich in clays".

Arne Andersson, Dept. of Soil Sciences, Uppsala: "Heavy metals - occurrence and distribution in the soil".

Göran Linner, Natural Swedish environmental protection board, Stockholm, Sweden: "Some aspects on the turnover of heavy metals in natural waters".

The discussions were lively. Further, short glimpses were given from the Oxford conference by myself.

There were some changes in the board. Thus Per Aagard at the Norwegian Geotechnical Institute (NGI, Boks 40, Ås, Oslo 8) has taken over the secretory post, however, backed up by the former secretary Sven Snäll, (SGU, Box 670, S-751 28 Uppsala, new address from Febur. 1st 1979). Bengt Åke Nystrand (Div. of Quaternary Geology, University of Uppsala, Box 555, S-751 22 Uppsala) is the new treasurer.

The spring meeting will be arranged in early June on Iceland, if enough participants (30) get together for the flight from Copenhagen. A 7-days excursion is planned.

Ann Marie Brusenwitz

USSR

In May 1978 the USSR Mineralogical Society had a Meeting in Kemsh (Krymsk) on general concepts of mineralogy (what is a mineral, mineral species, isomorphism, polymorphism, polytypism etc.).

The IMA conference in Novosibirsk (4/10.9.1978) had topics on typomor- phism and physics of minerals with a number of papers dealing with phyllosilicates and clay minerals.

In 1979 we expect a USSR Clay Conference in Vladivostok.

The publishing House "Nauka" had edited in 1978 collected papers "Composition and structure of minerals as indicators of genesis". In particular there are papers on the use of crystal structure data for deduction of formation conditions of dioctahedral phyllosilicates.


P.V. Chuchkrov

USA

Overview of the bloomington clay minerals conference

A total of 180 scientists from throughout the United States and several foreign countries met in Bloomington, Indiana, October 8-12, for the 27th Annual Clay Minerals Conference. The meeting was held in the Memorial Student Union Building on the campus of Indiana University.

The meeting started on Monday morning with a symposium on black shales; with emphasis given to the various types, occurrence, formation and chemistry. It was stressed that the shales represent a possible source of energy in the future because of their organic content.

The rapid accumulation of radioactive wastes is creating a serious disposal problem. Several methods of disposal in shale beds and salt deposits were presented in a special session. A major factor clouding the issue is the vacillating position of government policy which is continually changing the direction of the various research programs.

The surface reactivity of clay minerals is an important characteristic for determining their chemical properties. In nature many of the clay minerals are coated with an amorphous material which can be either organic or inorganic in nature. The identification and characterization of these amorphous materials was addressed in a number of research papers.

Naturally occurring zeolites were the subject of several papers at the meeting. Their composition, physical properties and occurrence in different areas were discussed in detail. The usefulness of natural zeolites and their importance to industry is steadily increasing; however, a warning was given that shoddy research among the health and medical professions and premature release of incomplete data endangers the continued growth and use of this versatile class of minerals. It was also suggested that the same irresponsible reporting could have a similar serious effect on other clay minerals.

The highlight of the meeting was the Presidential address by Dr. John Hayes. John discussed sandstone diagenesis in great detail and related the effects of chemical and physical phenomena to the storage and production of hydrocarbons in this type of rock. The presentation was very comprehensive with several laboratory techniques being discussed, as well as how these techniques could be used effectively to aid in oil and gas production. Several hydrocarbon producing sandstones were used as examples where these techniques were successfully employed.

The meeting was concluded with a reception, sponsored by Aquafine, Inc., and banquet. Entertainment was furnished by the Singing Bollers. This was followed on Thursday with a field trip through the beautiful Indians countryside to visit Pennsylvanian underclays and New Albany occurrences of black shale.

The Clay Minerals Society appreciates the efforts of Dr. Haydn Murray, and all those who served on the various committees, for making this meeting a success.

Wayne F. Hower and Albert C. Kunkle

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<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>Place</th>
<th>Organization</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 19-22</td>
<td>England</td>
<td>Sheffield</td>
<td>Autumn Meeting Clay Minerals Group of the Mineralogical Society</td>
<td>21</td>
</tr>
<tr>
<td>September 26-28</td>
<td>Italy</td>
<td>Sardinia</td>
<td>ICSOSA and AIM Conference on New Processes in Aluminum Production. Details: AIM, Piazzola Morandi 2, 20121 Milano</td>
<td>17</td>
</tr>
<tr>
<td>September</td>
<td>Hungary</td>
<td>Rome</td>
<td>IGCP Working Group on Genesis of Kaolins</td>
<td>19</td>
</tr>
<tr>
<td>October</td>
<td>Czechoslovakia</td>
<td>Teplíce</td>
<td>8th Conference on Clay Mineralogy and Petrology</td>
<td>19</td>
</tr>
<tr>
<td>1980</td>
<td>France</td>
<td>Paris</td>
<td>12th General Meeting of the International Mineralogical Association</td>
<td></td>
</tr>
<tr>
<td>July 6-12</td>
<td>Fed. Rep.</td>
<td>Bayreuth</td>
<td>Sixth International Conference on Thermal Analysis. Details: Sixth ICTA '80, POB 1120, D-8072 Selb/Bayern</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>New Zealand</td>
<td>Palmerston-North</td>
<td>Meeting of Commissions IV, V and VI of the International Society of Soil Science on Soils with Variable Charge. Details: Soil Bureau DSIR, Private Bag, Lower Hutt, New Zealand</td>
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<tr>
<td>April</td>
<td>Poland</td>
<td></td>
<td>2nd National Conference on Clays and Clays Minerals</td>
<td></td>
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</table>
New Books


