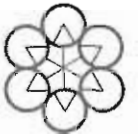


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ASSOCIATION INTERNATIONALE POUR L'ETUDE DES ARGILES - INTERNATIONAL
ASSOCIATION FOR THE STUDY OF CLAYS - INTERNATIONALE VEREINIGUNG ZUM
STUDIUM DER TONE - МЕЖДУНАРОДНАЯ АССОЦИАЦИЯ ПО ИЗУЧЕНИЮ ГЛИН

newsletter

February, 1981 no. 17

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In this issue

Page

President's Podium

2

Council Affairs

3

1981 International Clay Conference (Italy)

4

International Clay Activities

6

Fourth European Clay Conference, Freising, 1980

National Clay Groups

9

Austria, Australia, Czechoslovakia, France, German
Federal Republic, Great Britain and Ireland, Hungary,
Japan, Scandinavia, South Africa, Spain, U.S.S.R.

Recent Deaths

19

Prof. C.W. Correns (1893-1980), Prof. J. Rodriguez-
Martinez (1929-1979), Prof. L. Wiklander (1910-1979)

Addendum to the Membership List, December 1980

22

Calendar of Meetings

29

New Books

30

Membership Application Form

31

The President's Podium

As would have been expected with local organization in the hands of our former Secretary General, Prof. Udo Schwertmann, the 4th Meeting of European Clay Groups in Freising, Federal Republic of Germany, was a resounding success. Virtually all European countries were represented and it was most heartening to see the number attending from eastern Europe: we sincerely hope that this heralds an era of closer collaboration in clay research between all countries irrespective of politics or creed. The meeting was particularly useful to me as a means of meeting members and exchanging views intermediate between two rather more formal International Conferences: although "European" in name, the meeting was indeed attended by scientists from as far away as America and Australia. Discussions were many and varied, ranging from highly scientific through organizational to purely personal and my only regret is that there was insufficient time to do justice to what looked like some excellently produced and displayed posters. Perhaps organizers of future meetings with poster sessions might consider leaving some period each day without other activities so that more benefit can be derived from these excellent displays by both participants and authors.

The post-Conference excursion, under the expert guidance of Prof. Dr. H.M. Köster and Dr. H. Kromer, was particularly international in character as the 20 participants came mainly from different countries. This led to many interesting discussions - and the variety of views on kaolin genesis at some localities clearly ensures research for many years to come! To Prof. Dr. K. Jasmund, Chairman of the Deutsche Ton- und Tonmineral-Gruppe, the official hosts, and all involved in organization, a hearty "Thank you" for a magnificent meeting.

Council of AIPEA met formally during the Freising meeting and decided:

- (a) to revise the Statutes of AIPEA in time to present the new Statutes for acceptance in Italy;
- (b) to accept formally the very kind invitation of the National Clay Society to organize the 8th International Clay Conference in Denver, Colorado, USA, during the last week of July 1985;
- (c) to institute an Award enabling an outstanding young scientist to attend an International Clay Conference (this will not, unfortunately, be in operation for the Italian Conference);
- (d) to accept, with gratitude, the report of Prof. Veniale and his Committee, who have put an enormous amount of work into organizing the 7th International Clay Conference: details of what are likely to be a stimulating, if very busy, seven days appear elsewhere in this issue.

In the field of international relations, we are delighted to report that Mr. Zheng Zhi, Deputy Director of the Institute of Geology and Mineral Deposits of the Chinese Academy of Sciences, Beijing (Peking), has been appointed official representative to AIPEA by the Geological Society of China. Moreover, through the initiative of Prof. Veniale,

we expect a Chinese delegation to attend the 1981 International Clay Conference. We in AIPEA look forward to meeting and welcoming our Chinese colleagues and I have assured them that, should any of the delegation wish to visit any clay mineralogical laboratories while they are in Europe, they will be made most welcome. Also on the subject of international relations, it was a great pleasure to represent AIPEA at the International Union of Geological Societies (IUGS) Council Meeting during the International Geological Congress in Paris in July. IUGS has great regard for its Affiliated Organizations - and may I recommend to each of you the excellent and readable periodical Episodes published at a very reasonable price (\$ 12 per annum) by IUGS. It well repays study.

Since this may be the last Newsletter before the Italian Conference, may I express the great pleasure it has given me to serve AIPEA during this period and thank you all for your support. It has not been possible to visit as many national clay groups as I would have liked but the friendliness and hospitality of those I did visit was overwhelming. Meantime, I look forward to seeing you all in Italy. Council hopes you will make a special effort to attend this Conference, as it will have a surfeit of good things as well as something of interest to everybody.

R.C. Mackenzie

Council Affairs

Council Meeting at Freising

Council of AIPEA met at Freising, Federal Republic of Germany, during the Fourth Meeting of the European Clay Groups. Nine members attended the meeting. The agenda was as follows:

1. Welcoming address.
2. Minutes of Council meetings on July 10 and 14, 1978.
3. Business arising from minutes.
4. Location of 1985 International Clay Conference.
5. Secretary General's report.
6. Treasurer's report.
7. Non-payment of annual subscription.
8. IUGS Matters.
9. Final report on Oxford Conference.
10. Ratification of Nominating Committee.
11. Seventh International Clay Conference.
12. Revision of Statutes.
13. Next Meetings.
14. Other business.

Major decisions have been summarized in the President's Podium in this Newsletter. The next meeting will be held during the Seventh International Clay Conference on September 6, 1981.

Membership

An up-dated Membership List was distributed with Newsletter no. 16, February 1980. The present issue (no. 17) contains an addendum to the list, which comprises the names of new members and corrections in designation, address or membership.

The number of members kept steadily increasing during the last two years from 518 (March 1979) to 660 (August 1980). The geographical distribution at the latter date was as follows: USA 171, France 105,

Italy 96, Japan 34, Federal Republic of Germany 32, Belgium 31, United Kingdom 27, Canada 25, Spain 23, Netherlands 17, Australia 15, remaining countries (less than 10 members) 84.

Up-dated copies of the AIPEA recruiting document were prepared and distributed among Liaison Officers attending the Freising meeting of the European Clay Groups, or sent to them by post.

Publications

The Proceedings of the Sixth International Clay Conference are still available and can be obtained from Elseviers Scientific Publishing Company, Amsterdam, New York.

The Chairman of the Nomenclature Committee, Prof. S.W.Bailey prepared a "Summary of Recommendations of AIPEA Nomenclature" which was published in Clay Minerals 15 (1980) no. 1, in Clays and Clay Minerals 28 (1980) no. 1 and in several other mineralogical journals.

1981 International Clay Conference (Italy)

The 7th International Clay Conference will be held on September 6-12, 1981 at Bologna and Pavia, Italy. The first circular, with a green front cover, has been sent to the 450 scientists and 200 accompanying persons who replied to the first invitation.

Scientific Programme

	number of <u>papers</u>
11 session-groups (oral communication): x 2 (x3) parallel 15 minutes allocated for each presentation, group of 4 papers + ½ hour discussion	90 (120)
3 poster sessions (25-30 exhibits)	75 (90)
3 invited lectures (plenary)	$\frac{3}{8}$
8 introductory lectures (chairmen of Special Sessions)	$\frac{8}{4}$
4 offered lectures (chairmen of Scientific Sessions)	$\frac{4}{4}$
9 monographs on Advanced Methods of investigation as applied to clay minerals (plenary lectures)	(special volume)
- joint meeting with the Interest group on Water-Rock Interaction of the IAGC (International Association of Geochemistry and Cosmochemistry): "Equilibria and kinetics of clay minerals in aqueous solutions"	8
- symposium: The role of clay minerals in nuclear waste disposal problems	
- seminar: Occurrence and genesis of palygorskite-sepiolite	
- round-table: Nomenclature of mica-clay minerals	

Scientific Session (offered introduction: Lecturers)

1. Crystal chemistry and structure.
2. Surface chemistry and interactions. (L.Heller-Kallai)
3. Colloidal properties.

4. Genesis and synthesis. (F.C.Loughnan)
5. Geology and geochemistry. (E.Galan)
6. Industrial and technological applications
7. Investigational techniques. (J.Thorez)

Special Sessions (introductory lectures)

- S-1. Clays in petroleum generation. (W.D.Johns)
- S-2. Clays as catalysts. (F.D.Ovcharenko)
- S-3. Clays in ceramics: "Mineralogical and technological characteristics of ceramic clays". (H.Kromer)
- S-4. Clays in engineering and soil mechanics: "Influence of particle arrangement on the geotechnical behaviour and properties of clays". (J.E.Gillot)
- S-5. Role of clay in environmental sciences. (M.L.Jackson)
- S-6. Weathering sequences: present, recent and ancient: "Séquences d'altération Aplansissements climatiques. Surfaces et paléosurfaces". (G.Millot)
- S-7. Amorphous and ill-crystallized components of soils and sediments. (K.Wada)
- S-8. Colour of soils and sediments. (R.M.Taylor)

Invited Lectures (plenary)

- J.Konta: Present state and development trends of clay science. (opening lecture)
- G.W.Brindley: Teaching clay mineralogy. (closing lecture)
- F.Lippmann: Thermodynamic status of clay minerals. (introductory lecture to IAGC joint meeting)

Reviews (state-of-the-art, etc.)

- J.Hower, R. Grim and D.Eberl: The nomenclature of mica-clay minerals.
- R.Dayal: The role of clay minerals in nuclear waste disposal problems.
- A.Singer: Occurrences and genesis of palygorskite-sepiolite.
- R.A.Kühnel: Clay mineralogists in action: from Stockholm to Oxford.

Monographs: Advanced Methods of investigation as applied to clay minerals (Authors and topics)

- J.J.Fripiat (editor): Application of far infrared spectroscopy.
- P.L.Hall: Neutron scattering
- W.E.E.Stone: Nuclear magnetic resonance
- P.Canesson: X-ray photoelectron spectroscopy
- B.A.Goodman: Mössbauer spectroscopy
- R.Schoonheydt: Ultraviolet and visible light spectroscopy
- J.P.Eberhart: High resolution electron microscopy
- J.Pinnavaia: Electron spin resonance
- R.C.Mackenzie: The possible value of lesser-known thermal methods in clay studies.

Conference literature

The Conference literature will include a Book of Abstracts, a Procee-

dings volume (ca. 60 full papers) and a special volume "Advanced Methods of investigation applied to clay minerals".

Time Table (7-12 September 1981)

The first 3 days (Monday-Wednesday) will be spent in Bologna. On the day of transfer to Pavia (Thursday) one can visit the Research Center of E.N.I. (National Oil Company) or the ceramic district around Sassuolo. On Friday and Saturday the Conference will be held at the University of Pavia.

Special trips for accompanying persons are arranged to Ravenna, Venice, Milan and Pavia.

Excursions

Pre- and post Conference excursions are planned to central and southern Italy and to Sardinia and Sicily.

Registration

All correspondence should be addressed to Prof.F.Veniale, chairman of the Organizing Committee, 7th International Clay Conference 1981, c/o Istituto Mineralogia Petrografia Università, via Bassi 4, 27100 Pavia, Italy. Key date for submission of papers or abstracts: April 15. Registration fees: U.S.\$ 250. Reduction for members of AIPEA (and IAGC) U.S.\$ 50 and for junior participants (less than 27-30 years old) U.S.\$ 150. The costs of the Conference literature and social events are included in the registration fees.

International Clay Activities

Fourth European Clay Conference, Freising, 1980

Scientific and social programme

The Fourth Meeting of the European Clay Groups was held in Freising, West Germany from September 8th - September 10th, 1980 and was organized by the Deutsche Ton- und Tonmineralgruppe. Approximately 240 participants attended from 28 different countries the best represented countries being West Germany (45), France (35), Spain (24) and Great Britain (22). The conference attracted people from many different fields of interest, with the majority being involved in soil science and agriculture, geology, chemistry and industrial applications. Most participants were accommodated in the Bildungszentrum (where the meeting also took place) which is perched on the Domburg, a hill overlooking the old town of Freising. Everyone agreed that it was a most beautiful and romantic setting.

The conference opened with a plenary lecture by Prof.G.Lagaly on Clay-Polymer Interactions, a field in which Prof.Lagaly has made many outstanding personal contributions. Thereafter, the large number of papers submitted for oral presentation meant that the conference was

organized on the basis of simultaneous sessions. This worked very well, however, and it was usually possible to move in between sessions quite easily. A number of papers were also presented in poster form and these invariably generated lively and stimulating discussion. It is to be hoped that poster sessions will become a regular feature of future European Clay Conferences. In addition to the formal scientific sessions, an informal discussion on surface and structural chemistry was organized as well as an interesting exhibition of equipment and books.

After the Conference there was an afternoon field trip to visit some soil profiles. A full two-day field excursion was also arranged to visit clay deposits of economic interest in North-East Bavaria (see below). Although the writer was not able to participate in these excursions it seems that both were highly enjoyable and informative.

Socially, the Conference was also a great success. Highlights included an organ recital and a tour in the Rom, the famous cathedral in Freising, and a memorable Bavarian evening organized by the local committee, at which an inscribed drinking mug was presented to each guest. The latter part of the evening was notable for the unprompted choral singing of the Italian group and augurs well for the success of the International Clay Conference next September. Perhaps one should also mention the Volkfest in Freising, which proved an irresistible attraction to many delegates (myself included).

It really was a most excellent conference from every point of view and Prof.Schwertmann and his colleagues on the Organizing Committee deserve our heartiest congratulations and sincere thanks for making our all too brief stay in Freising so enjoyable and rewarding.

M.J.Wilson

Field excursion

The successful Fourth Meeting of the European Clay Groups in Freising was followed by an equally interesting and enjoyable three-day field trip to the kaolin and clay deposits of eastern Bavaria from September 11 to 13.

September 11: on the first day we visited the Rohrhof clay pit belonging to the Oberpfälzische Schamotte- and Tonwerke GmbH in Pontholz where grey kaolin clays of the Miocene age are extracted and used for the manufacture of building and sanitary ceramics, chimney flues, etc. or fired and used as refractory raw material. The kaolin clays contain varying proportions of clastic quartz, mica or I-M interstratification. The varieties of clay with a higher amount of lignite substance are used for the manufacture of the lightened chamotte, i.e. calcined kaolinite clay.

The kaolin pits in Hirschau-Schnaittenbach are considered to be one of the most important areas of residual kaolin deposits of continental Europe. The open pit area forms a strip 300 to 400 m wide and about 6 km long, its thickness reaching up to about 75 m. We could

photograph and touch pronounced parallel layering and cross bedding of kaolinized arkoses composed mainly of quartz, potassium feldspar and well ordered kaolinite, a small amount of mica being present also. Original arkoses of the Middle Buntsandstein were poorly sorted in the environment of river streams, their texture strongly varying from one thin layer to the other. The kaolinization of arkoses occurred immediately during the Triassic. These arkoses are processed in the plants of three companies, i.e. Eduard Kick in Schaittenbach, Gebr.Dorfner OHG in Hirschau, and the Amberg Kaolinwerke in Hirschau, where we saw one of the most interesting and modern dressing methods: automatized homogenization, washing, sieving, hydrocycloning and electromagnetic separation, sedimentation, pressing and drying, enabling washed kaolin, further highgrade quartz enriched to > 99% SiO₂, and potassium feldspar to be obtained. Uses of the washed kaolin: filler for paper, rubber, plastic, insecticides etc., one of the components for the manufacture of fiberglass products, white-concrete and ceramics. Uses of quartz as sands or powder after fine grinding: glass, ceramic, chemical, construction (special concrete, special plasters), foundry industries, sand-blasting, municipal water filtering. Uses for potassium feldspar (enriched to 70 - > 90%): ceramic, enamel, glass, filler industries. We spent the first night in Amberg, a charming town with a historical medieval core.

September 12: a visit to the Rappauf kaolin pit not far from Tirschenreuth with a typical kaolin crust of weathering on biotite-muscovite granite of the Falkenberg Massif, mostly of coarse-grained texture and with well visible kaolinite pseudomorphs after acid plagioclase and potassium feldspar. The raw material is dressed in the nearby "Schmelitzhöhe" plant for the washed kaolin and the main product, so called "pegmatite", a mixture of undecomposed potassium feldspar and quartz in a ratio of about 1:1. In Tirschenreuth, fine china is manufactured by the world-famous Hutschenreuth Company. In this town we also visited an interesting exhibition of the hand-engraved pewter bowls and dishes.

The visit to the Exhibition Center of the ceramic tiles and construction ceramics in Schwarzenfeld belonging to the Buchtal Ceramic Works in Schwarzenfeld, not far from the Czechoslovak frontier, has shown what wonderful final products can be manufactured from the raw materials among which clay is the major constituent. The Buchtal Ceramic Works was founded in 1937 but their chief development era started after 1960. Its production capacity is 190,000 metric tons of raw materials per year which means 8 million sq. metres of tiling material. It also manufactures 400,000 m² of unique Keraion panels, measuring up to 2 sq. metres each with fabulously beautiful glazes. The creative group of research experts and artists, maintaining ideal links with the management and the 1,300 workers, strongly focused on the entire world market is able to prepare new colours and shapes each year. The tiles are used for wall- and floor-coverings, in living areas, office buildings, factories, public installations, in baths, swimming pools, facades of buildings etc.

The next visit was to the "Klardorf" clay pit, of maximum depth about 45 m and about 1 km long and 400 m wide, where various kaolinite clays up to silty-sandy clays of the Upper Tertiary age are selectively extracted and mostly used in the ceramic industry.

The second night was spent in Regensburg, one of the most interesting historical towns of Bavaria.

September 13: Sightseeing in the historical centre of Regensburg. The town and some places in its vicinity were already ruled by the Romans, who founded a strong fortification in 179 A.D. and named the place Ratisbona after original Celtic village Radasbona.

The field trip was led perfectly by Prof.H.M.Köster and Dr.H.Kromer. Twenty-four participants from 16 countries were happy to meet representatives of the named companies during lunch or dinner.

The guidebook edited for the Field Trip B contains 1 List of participants, 2 Time-table, stops, route and cumulative distances of the trip, 3 Geographical and geological description of the route by H.M. Köster, 4 Photocopy of the paper by H.Kromer and H.M.Köster, 1974, Clay and kaolin deposits of Eastern Bavaria, 5 Profiles of the "Rohrhof" and "Klardorf" clay pits by H.Kromer, 1978.

Jiri Konta

Publications

The Abstract booklet is still obtainable at a rate of DM 15 (including excursion guide, etc.) from the Organizing Committee, Institut für Bodenkunde, Technische Universität München, 8050 Freising-Weißenstephan, Fed.Rep.of Germany.

National Clay Groups

Austria

There is no formal clay group in Austria, but there are a number of scientists who are interested in clays as can be seen from information obtained through Prof.Schwaighofer, our new Liaison Officer in this country:

Vienna, Universität für Bodenkultur (Prof.Dr. B.Schwaighofer, Prof.Dr. G.Riedmüller, Dipl.Ing.Dr. H.W.Müller): the relation between the clay mineral content of pellicic sediments and their swelling properties, weathering in soils, (neo) formation of minerals in metamorphic rocks, clay mineral analysis of rocks used in road constructions.

Vienna, University (Doz. Dr. H.Kurzweil): diagenesis of pellicic sediments in the Vienna area and of Tertiary sediments in Lavanttal, glauconite studies, clay mineral analysis.

Vienna, Bundesversuchsanstalt (Prof.Dr. P.Wieden): weathering of materials used for constructions works, clay mineral analysis.

Graz, Technical University (Prof.Dr. H.Höller, Doz.Dr. H.Kollmer, Dr. U.Wirsching): experimental clay mineralogy in closed systems, hydrothermal alternations in volcanic sediments, geochemical research, clay mineral analysis.
Salzburg, University (Dr. J.M.Schramm): layer silicates in metamorphic sediments, relation between clay mineralogy and swelling properties.
Innsbruck, University (Doz.Dr. K.Czurda): mineralogical and chemical composition of clays, landslide potential of clays, relation between clay mineral composition and physical soil properties.

Australia

The 7th Conference of the Australian Clay Minerals Society was held in Melbourne on 21st-22nd August 1980. The following 13 papers were presented:

Physical properties of clays

K.Scotman & R.J.Hunter - Flocculation of kaolinite suspensions by polymers.
P.G.Duff - The effect of clays on some petrophysical determinations
S.Way - The influence of swelling clays in basalts on the sorption properties and drying shrinkage of the aggregate
O.G.Ingles & N.W.Lim - Accelerated Laterisation? - A new method for clay stabilization
K.Norrish - A swelling kaolin

Regional studies of clays

F.C.Loughnan & F.T.Roberts - The natural conversion of metakaolin to endellite at Burning Mountain near Wingen, NSW
J.C.van Moort - Mineralogy and chemistry of Tasmanian clay deposits
J.E.Siemon & J.P.Sawers - Geology of the Kingaroy kaolin province
G.P.Briner & B.P.Palmer - Mineralogy of soils of the western districts of Victoria

Mineralogical and geochemical studies

C.G.Swensson & J.C.van Moort - The mineralogy and geochemistry of the oxidized zone of the Broken Hill lode, NSW

Structures and weathering studies

P.G.Slade - The inferred structures of the interlamellar complexes formed by vermiculite and montmorillonite with benzidine and aniline
R.A.Eggleton - Mineral weathering
F.C.Loughnan, S.K.Monro & M.C.Walker - The Ayrshire bauxitic clays; an example of a fossil soil profile.
In conjunction with the Conference a Business Meeting of the Society was held, at which the new Executive Council was elected. The new Office Bearers are:

President: Dr. W.Emerson
Vice-presidents: Dr. J.A.Ferguson
Prof. O.G.Ingles
Secretary/Treasurer: Mr. R.M.Taylor
Council Members: Dr. R.A.Eggleton
Dr. R.J.Gilkes
Immediate past President: Dr. W.F.Cole

The next Conference is scheduled for Adelaide in 1982.

C.J.Lancucki
past secretary/treasurer

Czechoslovakia

Two meetings of the Group were held in 1980 in the Department of Petrology, Charles University, Prague.

June 24: J.Sindelář, secretary: Information on the organization of the 9th Conference on clay mineralogy and petrology in Czechoslovakia, 1982.

Professor Warren Huff, University of Cincinnati, Ohio, USA: Chemical characteristics and origin of Middle Ordovician potassium bentonites, USA.

October 8: J.Konta and J.Sindelář: Report on the 4th Conference of the European Clay Groups held on September 8 to 10, 1980 in Freising, Federal Republic of Germany.

J.Konta: Survey of the clay and kaolin deposits in Bavaria.

Information on the next Conference on clay mineralogy and petrology in Czechoslovakia and the possibility to organize the 5th Conference of European Clay Groups in Czechoslovakia.

Information on the possibility for Czechoslovak clay scientists to attend the 7th International Clay Conference in Bologna and Pavia.

J.Konta

France

The "Groupe Français des Argiles" organized one meeting in March 1980. The following papers were given:

- P.G.Rouxhet, J.Kayem, J.L.van Haecht, M.Gennen et M.de Bremaeker: Immobilisation de cellules de levure et chimie colloïdale.
- Y.Lebesque: Fixation de bactéries et levures sur les chamottes. Principe et applications.
- J.Berthelin: Interactions "Microorganismes-Argiles" et incidences sur la biochimie des sols.
- M.C.Jorand: Cytotoxicité et action hémolytique de quelques minéraux.
- J.C.Lapraz: Les argiles en pratique médicale courante.
- M.Letellier et J.J.Fripiat: Etude de l'eau dans des suspensions diluées d'hectorite.
- A.Plancon, G.Besson et C.Tchoubar: Etude par Rayons X des surfaces

interlamellaires des minéraux interstratifiés.

- P.Boyer: Quelques aspects de l'action des thermites du sol sur les argiles.
- F.Bergaya, M.I.Cruz, L.Gatineau et J.J.Fripiat: Organisation du méthanol dans l'espace interlamellaire des montmorillonites.

The Spring meeting of the French group will be held on March 1981. The topic is "The organic reactions on the clay mineral surfaces". Offers of papers should be forwarded as soon as possible to the group secretary (Dr. H.Suquet, Laboratoire de Chimie des Solides, Université P. et M.Curie, 4, Place Jussieu - 75230 Paris Cedex 05).

The Autumn meeting 1981 will be replaced by the 7th International Clay Conference (Italy).

H.Suquet

German Federal Republic

The outstanding event was the 4th meeting of the European Clay Groups, which took place in Freising from 8. - 10 September. About 270 participants from nearly 30 countries met at this opportunity. Within 10 sections 110 papers have been published - only 40 of them in the poster sessions. For the occasion of this international meeting a special issue of the Geologisches Jahrbuch (Ser. D, No. 39) "Clays and Clay Minerals in the Federal Republic of Germany" has been published in cooperation with the DTTG. This paper has been presented to all members of the conference by the organizing committee.

In Freising a meeting of the members of the DTTG took place. Prof. Jasmund - now emeritus professor - retired from his presidential position. Prof. K.H.Schüller, Lauff, was elected the new president.

On 29. August 1980, Prof. C.W.Correns, Göttingen, passed away.

F.J.Eckhardt

Great Britain and Ireland

A meeting of the Clay Minerals Group was held at the Royal Entomological Society, London on November 7th, 1980. The following papers were read.

Invited Lecture: Quantitative analysis of clays and minerals in North Sea sandstones by X-ray powder diffraction: D.Wood (B.P.Research Centre).

Neutron diffraction studies of clay minerals: J.M.Adams (University of Wales, Aberystwyth).

A swelling hematite-silicate complex in weathered granite: M.J.Wilson, J.D.Russell, J.M.Tait, D.R.Clark, A.R.Fraser and I.Stephen* (Macaulay Institute and *University of Aberdeen).

Studies of the distribution of uranium in samples of kaolinized granite from south-west England: I.R.Basham and N.J.Forsey (Institute of Geological Sciences).

Constraints on heavy metal migration - A study of the attenuation of

iron in the Lower Greensand using Mössbauer spectroscopy and wet chemical analysis: Christine A.M.Ross and G.Longworth (Institute of Geological Sciences).

Removal of resin from standard soil thin sections by low temperature ashing as a means of following transmitted optical by scanning electron microscopy: F.Price and D.Jenkins (University College of North Wales, Bangor).

Swelling minerals in a basalt and its weathering products: D.C.Bain and J.D.Russell (Macaulay Institute).

The clay mineralogy of fresh water and estuarine sediments in the Wash drainage basin: R.D.Wilmot (Institute of Geological Sciences).

Clay mineralogy of sediments from the Bauer Deep, S.E.Pacific with particular reference to smectite formation: T.Cole, D.S.Cronan and H.Shaw (Imperial College, London).

Abstracts of these papers are available from the Group Secretary (Dr. M.J.Wilson, Macaulay Institute for Soil Research, Aberdeen, AB9 2QJ).

At the Annual General Meeting of the group the following committee were elected to serve for the coming year.

Chairman: Mr. J.A.Bain

Secretary: Dr. M.J.Wilson

Treasurer: Dr. D.C.Bain

Principal Editor: Dr. D.M.Morgan

Committee Members: Dr. J.M.Adams

Dr. C.V.Jeans

Dr. W.B.Jepson

Dr. C.M.Shepperd

Dr. D.A.Spears

Mr. M.Stentiford.

Spring Meeting 1981. This meeting is being organized jointly with the Petroleum Exploration Society of Great Britain and will be held at Churchill College, Cambridge on April 10, 1981.

The theme is: Clays in the Discovery and Recovery of Petroleum.

The following papers will be read:

Clay Mineral diagenesis in Rotliegend sandstones of the Southern North Sea. N.C.Rossel (Shell U.K. Exploration and Production, London).

Production technology in Rotliegend sandstones of the Southern North Sea. T.Wildig (Shell U.K. Exploration and Production, London).

Electron microscope and X-ray diffraction studies of filamentous illitic clay from sandstones of the Magnus Field. W.J.McHardy, M.J. Wilson and J.M.Tait (Macaulay Institute, Aberdeen).

Effects of clays on water injection into the Magnus Reservoir. G.O. Langley, Nadia Pallatt and J. Heaviside (B.P.Research Centre, Sunbury-on Thames).

Role of clay minerals in influencing poro-perm characteristics in the Bridport sands of S.England. Christine M.Shepperd and K.A.Morris, (British Gas Corporation, London).

Relation of smectite-illite transformation and abnormal fluid pressure

development in the sub-surface. C.H. Bruce (Mobil Exploration and Producing Services Inc., Dallas).
Clay minerals in stratigraphical correlation and palaeogeographic reconstruction; examples from the Lower Cretaceous of the Southern North Sea and the Permo-Trias of the S.W. Approaches. C.V. Jeans and M.J. Fisher (University of Cambridge and B.N.O.C., Glasgow).
Significance of clays in the petroleum geology of the Niger Delta. H. Shaw and D.C. Lambert-Aikhionbare (Imperial College, London).
Diagenetic modelling of clay cementation in fluvio-deltaic sandstones. A. Hurst and Hilary Irwin (Dept. of Geology, University of Reading and Dept. of Geology, University of Aberdeen).

Registration forms for this meeting may be obtained from the Group Secretary.

Autumn Meeting 1981. This will be held in London on November 6, 1981. There is no particular theme for this meeting and offers of papers on any aspect of clay mineralogy should be sent to the Group Secretary as soon as possible.

M.J. Wilson

Hungary

On the sessions of the Clay Minerals Group of the Hungarian Geological Society held in Budapest the following papers were presented:

January:

Hidasi, J.: Information on the 8th Czechoslovak Conference on Clay Mineralogy and Petrology (Teplice, Oct. 1979).

Földvári, M.: On the excursion of the 10th International Kaolin Symposium to Slovakia (Sept. 1979).

February:

Juhász, Z.: Adsorption of water vapour on the surface of silicates - Part I.

March:

Celebration of the 20th anniversary of the foundation of the Clay Minerals Group.

Széky-Fux, V.: Chairman's address.

Kliburszky-Vogl, M.: Development of clay mineral determination methods during the last 20 years.

Varju, Gy.: Practical results of clay mineral research during the last two decades.

May:

Juhász, Z.: Adsorption of water vapour on the surface of silicates - Part II.

June:

Bidló, G.: Mineralogical investigation of red clays from northern Transdanubia.

Németh, E.: Effect of composition and facies of reservoir rocks on the oil production using CO₂ (interrelation of clay minerals, carbonates and CO₂).

September:

Discussion on the Recommendations of AIPEA Nomenclature Committee (Bailey 1980), introduced by I. Viczián.

November:

Gerei, L., Reményi, M.: Mineralogical investigation of fine fractions of sodic soils.

Pécsi-Donáth, É., Gerei, L., Reményi, M.: Mineralogical composition of the fine fraction of typical fossil soil profiles from the bore-hole Paks-Dunakömlöd (central Hungary).

On Oct. 6 a joint meeting on "High temperature reactions of rocks containing clay minerals" was held together with the Scientific Association for Silicate Industry in Budapest. Papers presented on this meeting dealing with clay minerals were as follows:

Varju, Gy.: Role of parent rock in the formation of mineral raw materials containing clay minerals.

Nemecz, E., Vassányi, I., Szabó, S.: Effect of chlorine treatment on kaolins at different temperatures.

Juhász, Z.: Inner morphology of firing products of kaolins.

Kacsalova, L.: Problems of high-temperature swelling of the Füzerradvány illite.

Kocsis, L.: A study of the formation mechanism of porcelain forming phases.

Gábor, P.: Effect of the gas atmosphere on the decomposition reactions of kaolinite.

Tomschey, O.: Transformation of kaolinite in function of the water vapour pressure and temperature.

Tasnádi, N., Somodi, Zs.: A study of heating reactions of different clay raw materials by means of high-temperature X-ray camera.

Dódony, I.: Electron microscopic investigation of thermal transformations of kaolinite and illite.

New publication:

The Proceedings of the 10th International Kaolin Conference, a meeting of the IGCP Working Group No. 23, "Genesis of Kaolins" held in Budapest, 1979, will appear in 1981. The Proceedings will be published as a special volume of the journal "Acta Universitatis Szegediensis, Acta Mineralogica-Petrographica" a periodic publication of the Institute for Mineralogy, Geochemistry and Petrography of the A. József University of Szeged edited by Prof. Gy. Grasselly. It is planned to make accessible a limited number of copies of the volume to colleagues who are not members of the working group or do not receive the journal regularly. Persons or institutions interested in receiving the volume are asked to contact Dr. István Viczián, Hungarian Geological Institute, Népstadion út 14, Pf. 106, H-1442 Budapest, Hungary.

István Viczián

Japan

The 24th General Annual Meeting (1980) was held at the Faculty of

Education, Gumma University, Maebashi City, Gumma Prefecture from November 7 to 10 with a two days field excursion to localities of clay minerals in "Green Tuff" and one porcelain manufacturer near the Minakami hot spring region. 50 papers on general subjects and two special lectures were presented and one symposium was held:

Special lectures, 1. On mineral surfaces, T.Hata (President of the Gumma University) and 2. Effective meaning of clay minerals for genesis of ore deposits, N.Imai (Prof. of the Faculty of Science and Engineering, Waseda University).

A symposium titled "New aspects of clay minerals" was organized and 5 reports were presented.

The Takeshi's cooperative study project by the Science Research Fund has worked on the problem of "Formation of sheet silicate minerals in the weathering process" and a symposium was held at Hayama, Kanagawa Prefecture. 20 reports were presented on August 31 to September 2. Results of the investigations of this project will be published in Japanese as a special volume of the "Journal of the Mineralogical Society of Japan", early 1981.

H.Minato

Scandinavia

Report from the Nordic Clay group.

The spring meeting 1980 was planned to be held in Finland, but had to be cancelled because of transportation strikes.

The autumn meeting in Stockholm on October 23 had the following programme:

A.M.Brusewitz, SGU, Uppsala: Report from the clay conference in München, Sept. 1980.

Knut Pederstad, Inst. f.Geologi, Univ., Oslo: "Mineralogical and chemical studies of sediment cores from Skagerak".

Per Aagaard, Geotechnical Inst., Oslo: "Kinetics by the hydrolysis of minerals".

Arne Gustavsson, Höganäs AB, and Annie Skarby, Geol. Inst. Univ., Stockholm: "The kaolin formation in the North-eastern part of Skåne, in the view of chemistry and of paleobotany".

Torbjörn Alexandersson, Geol. Inst. Univ., Uppsala: "Sediment - seawater, reactions in continental sea sediments".

Gunnar Borg, Geol. Inst. Univ., Uppsala: "Salinity variations in the Baltic depression".

There were a few changes of the council. Secretary of the group is: Stig Ledin, Inst. of Soil Science, S-750 07 Uppsala, Sweden.

Treasurer: Gunnar Borg, Univ. of Uppsala, Geol. Inst. Box 555, S-751 22 Uppsala, Sweden.

Chairman of the group is: Erik Lotse also at the Inst. of Soil Science, S-750 07 Uppsala.

Ann Marie Brusewitz

South Africa

Although there is no separate Clay Minerals Group in the RSA, there are several workers in the field of soil science (Soil Science Society of Southern Africa), geology (Mineralogical Association of South Africa, which is part of the Geological Society of South Africa) and ceramics (South African Ceramic Society) who are interested in clays and clay minerals. At a recent Mineralogical Association Symposium held at the National Institute of Metallurgy on the 25th September 1980 a special discussion period was set aside to discuss "Clay Mineralogical Studies" in the RSA. Several participants supported the idea of starting a "clay minerals interest group" within the Mineralogical Association of S.A.

Dr. Robert Fitzpatrick also reported on AIPEA, its origin and activities, and the 1981 International Clay Conference to be held in Italy. The following papers, dealing with clay minerals, were delivered at various symposia and seminars during 1980:

J.N.Dunlevey: The application of X-ray diffraction techniques in geological research (Geological Survey Symposium on 25 May).

J.H.Bredell: General aspects of the Bauxite investigation in Natal (Geological Survey Symposium on 16 June).

J.Husseini: An investigation into soil-water relations and soil structure of a Vertisol (Soil Science Society of S.A. 29 January).

M.V.Pey: The potential use of fluoride for ameliorating acid, phosphorus-deficient soils (SSS SA. 29 January).

R.W.Fitzpatrick: Distribution, composition and crystallinity of goethites in soils and weathering materials along the eastern seaboard of South Africa (SSS SA 31 January).

R.W.Fitzpatrick: Clay mineralogical activities at the Soil and Irrigation Research Institute (Mineralogical Association of S.A. Symposium 25 September).

S.A. de Waal: Supergene, sphalerite (Mineralogical ASS, of S.A. Symposium, 25 September).

G.Smits: The mineralogy of the Rooibokkop copper vein deposit (Mineralogical ASS. of S.A. Symposium 25 September).

K.Norrish: "X-ray fluorescence methods and on identifying the forms of phosphorus and trace elements in soils using electron microprobe techniques" (Soil and Irrigation Research Institute Symposium on 27 October).

Publications

J.H.Bredell: A Borehole Study with specific reference to Refractory Clay.

J.H.Bredell, P.J.Barnardo and G.F.J.Horn: A Reconnaissance Survey of Bauxitic Material in Southern Natal, Reports 1 and 2. Price R 21.70. Obtainable from: The Director, Geological Survey Private Bag X 112, Pretoria, 0001.

Six new issues of the x/bou-ker Series on Ceramic Raw Materials of Southern Africa were printed recently by the National Building Research

Institute, bringing the total number of these useful references to 57. They are x/bou-ker 52 test methods, x/bou-ker 53 Wallace clay, x/bou-ker 54 Palmer clay, x/bou-ker 55 Crammix ball clay, x/bou-ker 56 Blesberg feldspar, x/bou-ker 57 Wallace white clay.

Free copies are obtainable from the Publications Department NBRI CSIR, P.O.Box 395, Pretoria, 0001. A complete set is also obtainable in a special folder for R5.00 from the same address.

Future activities

1. Plans are going ahead for establishment of a "clay minerals interest group" within the Mineralogical Association of South Africa". The first scientific meeting of the interest group is being planned to be held at the Soil and Irrigation Research Institute in July 1981 and the general theme of the meeting will be "Methods of clay mineral analysis".
2. S.A.Ceramic Society:
18 March 1981: Meeting on "Heavy Clays"
22 April 1981: Pottery and Whiteware
24 June 1981: Meeting on Refractories
10 September 1981: Annual Ceramic Society Symposium.
3. National Institute for Metallurgy and Geological Society:
June 1981: International Conference on Applied Mineralogy in the Mineral Industry (ICAM 81) to be held in Johannesburg.

It is the aim of ICAM 81 to stimulate technical interchange on all those aspects of mineralogical activity, not only between applied mineralogists but also between them and other workers in the mineral industry, thus giving each an insight into the problems of the other.

Obituary

Dr. C.R.van der Merwe, a research soil scientist at the Soil and Irrigation Research Institute for 47 years died on 27 September 1980 in Pretoria. Dr. van der Merwe was born on the 1st December 1891 and received his doctorate in chemistry from the University of Stellenbosch. A pioneer in clay mineralogical analysis for pedological purposes in South Africa, Dr. van der Merwe was widely known as the father of South African pedology.

R.W.Fitzpatrick

Spain

Spanish-portuguese meeting on clay minerals

The V meeting of the Spanish Clay Society was held on September 24-27, 1980 at the National Laboratory of Civil Engineering in Lisbon (Portugal), with active participation of portuguese clay scientists. Approximately 50 participants of either country attended the meeting.

Twenty three papers were presented at the scientific sessions. In addition three general lectures were delivered by the following authors:

- J.Linares (Estación Experimental del Zaidín. CSIC.Granada).
"Mineralogy and Geochemistry of the bentonites from Almería".
- E.Ruiz-Hitzky (Grupo de Fisico-Química Mineral CSIC.Madrid).
"Organic Derivatives of silicates"
- C.de Sousa Figueiredo Gomes (Department of Geosciences, University of Aveiro).
"Structural defects on kaolinites".

J.M.Serratosa

USSR

In October 1980 in Zvenigorod we had a symposium on application of electron microscopy in mineralogy.

In 1981 the "Nauka"-Press will publish the following books:

1. Drits, V.A.:The structural study of minerals by selected area diffraction and electron microscopy (it was not published in 1980).
2. Chrystal chemistry of minerals (collected works).
3. Mineralogy and geochemistry of glauconite (collected works).
4. Lapteva, E.S., Yousoufov, T.S., Berger, M.S.:Physico-chemical changes of layer silicates at mechanical activation.

B.B.Zvyagin

Recent Deaths

Prof. C.W.Correns (1893-1980)

Professor Dr. C.W.Correns, who laid the foundation for clay mineralogy in Germany and was one of the founding members of AIPEA, died on August 29, 1980. He was an outstanding scientist in Germany with important contributions in the field of mineralogy, in particular clay mineralogy, petrology and geochemistry. He was born on May 19, 1893. His father was professor in botany in Tübingen. His scientific carrier started with his doctoral thesis (1920) dealing with a topic of sedimentology and containing the nucleus of his versatile interests. He then worked for the Prussian Geological Survey and was affiliated with Professor Freundlich, one of the great names in colloid science. In 1926 he participated in the German Meteor Expedition to the South Atlantic and became interested in the deep sea deposits collected during this mission. This was the starting point for his lifelong involvement with clay mineralogy. His detailed reports on the deep sea cores of the Meteor mission appeared in 1935 and 1937.

More papers followed in these years, papers of broad scientific interest and also papers devoted to new methods of investigation, mainly for clay minerals, which demonstrate his sound background in physical chemistry and colloid chemistry.

As the holder of the chair for mineralogy in Rostock (1930-1939) he attracted many able students and transferred to them his enthusiasm for sedimentology and clay mineralogy. In his first Rostock years the

separation of clay minerals, their identification by optical and x-ray methods was one of his favoured topics. He worked on the weathering of rocks which leads to clay mineral formation, which is to-day still an area of active research. He worked out at that time basic principles of clay mineral formation from ionic solutions.

In 1939 Correns took over the then newly founded Institute for Sediment Petrography at Göttingen. His interests then turned more to sedimentary rocks with all their geochemical importance. In 1941 he became also the director of the Institute of Mineralogy and Petrography, where V.M.Goldschmidt had been. In honor of Goldschmidt, Correns revived the field of geochemistry. Göttingen owes very much to him. In particular after the war, geosciences grew in this university and there are now modern institutes of Mineralogy-Petrology, of Sedimentology, Clay Mineralogy, of Geochemistry including the Central Laboratory for Stable Isotopes.

In 1961 Correns retired but as an emeritus remained scientifically active throughout the following years. He is the founder of the well-known Contributions to Mineralogy and Petrology and stayed in duty as the chief editor until his death. He also was one of the editors of Geochimica Cosmochimica Acta from the beginning until 1965. He was a member of numerous national and international academies. He received many distinctions such as honorary memberships of various societies and two honorary degrees. His international reputation was documented by the Roebling Medal granted to him by the Mineralogical Society of America.

Until his recent years he remained closely interested in Clay mineralogy even when he could not attend large meetings and international congresses any more.

All who known him personally will remember his vividness and clarity of thought, his broadness of mind, his great enthusiasm and thrive with which he went through his scientific life.

K.Jasmund

Prof. Dr. J.Rodríguez-Martínez (1929-1979)

Prof. J.Rodríguez-Martínez died at the age of 50, after a short illness, on January 28, 1979, in Santiago de Chile, while he attended the Ibero American Congress of Crystallography. At the time of his death he was Professor of Crystallography at the Autonomous University of Madrid.

Prof. J.Rodríguez-Martínez studied at the University of Granada where he graduated in Chemistry and in Pharmacy. He received a Ph.D. in Chemistry in 1953 and in Pharmacy in 1955. After being appointed Research Scientist of the National Research Council of Spain (CSIC) he went to the United Kingdom for a postdoctoral training, firstly through a fellowship of the March Foundation that enabled him to work at the Rothamsted Experimental Station, Harpenden, and later on, as

a Ramsay Fellow, in Cambridge University.

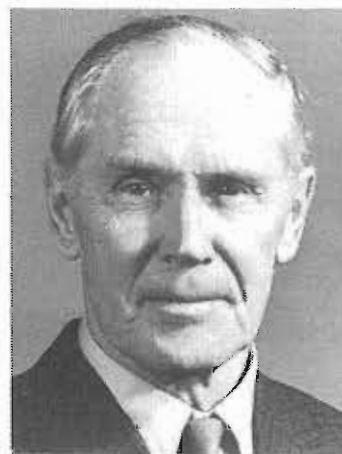
Upon return to Spain he was promoted to Senior Research Scientist of the CSIC and in 1962 he won the chair of Crystallography and Mineralogy of the University of Salamanca. From Salamanca he moved to the University of Navarra where he served as Dean of the Faculty of Sciences. In 1968 he transferred to the newly created Autonomous University of Madrid as Head of the Department of Geochemistry. Soon after, he became Vice Dean of the Faculty of Sciences and finally he was appointed Rector of the University. In 1973, Prof. J.Rodríguez-Martínez was nominated Minister of Education and Sciences of the Spanish Government.

The scientific contribution of Prof. J.Rodríguez-Martínez is contained in about 100 papers published in several journals in the fields of Mineralogy, Crystal Chemistry and Soil Science.

He dedicated a great part of his activity to the fostering of the scientific relations between Spain and the Latin American countries. As a result of his enthusiasm and good offices, specialized chairs to be occupied by Spanish scholars, were created in several Latin American universities. Thus, chairs with the names of Federico García Lorca, José María Albareda and Gregorio Marañón were founded at the University of San Marcos of Lima, Perú, and at the university of Paraguay. In acknowledgement of his achievements he received appointments as Honorary Professor from the Peruvian universities of Cuzco and San Marcos of Lima.

Among his students he had a reputation of teaching excellence and an ability to communicate his enthusiasm for scientific research. He was a man of great compassion, always ready to offer a friendly hand; he will be missed by the many of us who got to know him closely.

J.M.Serratosa



Prof. Lambert Wiklander (1910-1979)
Nordic clay and soil research suffered a heavy loss on September 27, 1979, when Professor Emeritus Lambert Wiklander died suddenly at the age of 69 years.

He was born in Viksjö, Ångermanland, and received his academic education at the Royal Agricultural College of Sweden, where he earned a doctoral degree in 1946. When Prof. Sante Mattson retired in 1951, Dr. Wiklander was appointed professor of soil science.

Even as an undergraduate student, Lambert Wiklander had the opportunity to do research under the guidance and

inspiration of Prof. Mattson. His first research work with Mattson on the amphoteric behaviour of soils had a strong influence on his future work.

Lambert Wiklander was extremely productive as a scientist. He published more than 100 scientific papers covering a wide range of topics. His doctoral dissertation, entitled "Studies on Ion Exchange with Special Reference to the Conditions in Soils", made him internationally known as an authority on ion exchange theory. He also made significant contributions to our knowledge of the chemical and mineralogical properties of Swedish soils: weathering and soil formation: phosphorus, potassium, and magnesium fixation; the effect of liming on the chemical and physical properties of soils; the composition of the soil solution and leaching of plant nutrients; the availability and uptake of plant nutrients; the content of heavy metals in soils, plants, and water; and acidification of soils and water.

As a teacher, Professor Wiklander was esteemed and respected. He had an outstanding ability to communicate ideas, theories, and research results.

Lambert Wiklander's expertise was widely recognized. He was a visiting professor in Egypt and the United States, and many soil scientists from other countries visited him in Uppsala. His contributions to paper sessions and discussions at many international congresses were highly regarded. As a Consulting Editor for *Soil Science* over a long period of time, he rendered valuable service to his profession.

At the time of his death, Prof. Wiklander served as chairman of the Nordic Society for Clay Research. Because of his thorough knowledge of his field, effectiveness as a speaker, and involvement in agricultural and environmental issues, he was often invited to present papers at meetings. With the decease of Prof. Wiklander, the organizations of which he was a member have lost an active, enthusiastic, and unusually gifted member. Those who came in close contact with him have lost a sincere friend.

Erik G. Lotse

Addendum to the Membership List, December 1980

New Members (116)

Argentina

Tschapek, Dr. M., Casilla de Correo 30, Sucursal 19, 1419 Buenos Aires

Australia

Andrews, Mr. W.H., Comalco Ltd., 95 Collins Str., Melbourne Victoria, Australia 3000.

Davey, Dr. B.G., Dept. of Soil Science, University of Sydney, NSW 2006.
Eggleton, Dr. B.A., Dept. of Geology, A.C.T., Australia 2600.

Austria

Kolmer, Dr. H., Institut für Technische Geologie, Petrographie und Mineralogie, Techn. Universität Graz, A-8010 Rechbauerstrasse 12.

Belgium

Decleer, J., Brieviersweg 198, B-8310 Brugge 3.
Moreau, Prof. J., Laboratoire de Minéralogie, Université Catholique, de Louvain B1348, Louvain la Neuve.
Mortier, Dr. W., Centrum voor Oppervlaktescheikunde en Colloïdale Scheikunde, de Croylaan 42, B3030 Heverlee.

Brazil

Moniz, Dr. A.C., Cain Postal 28, 13100 Campinas, SP.

Bulgaria

Russkova, Dr. N., Geological Institute, Str. Akad. G. Bonchov 1113, Sofia.

Canada

Baweja, Dr. A.S., Nuclear Programs Division Environment Canada, Ottawa Ontario K1A 1C8.
De Kimpe, Dr. C., Station de Recherches, Canada Agriculture, 2560 Chemin Gomin, Ste Foy G1V 2J3.
Grabs, S., Valhalla Research Centre, P.O. Box 16, Moose Creek, Ontario, K0C 1W0.
Miles, Mr. N.M., Chemistry and Biology Research Institute, Agriculture Canada, CEF Ottawa Ontario K1A 0C6.
Quigley, Dr. R.M., Faculty of Engineering, University of Western Ontario, London, Ontario N6A 5B9.

Czechoslovakia

Esterha, Dr. F., Cesky Geologicky Urad, Praha.
Gabriel, Dr. M., Cesky Geologicky Urad, Praha.

Finland

Romu, Dr. M., Institute of Quaternary Geology, University of Turku, SF-20500 Turku 50.

France

Bardin, M., Centre Technique des Tuiles et Briques, 17 Rue Letellier, 75015 Paris.
Bartoli, M.F., Centre de Pédologie Biologique CNRS, B.P. 5, 54500 Vandoeuvre.
Bernard, M.A., INRA Laboratoire des Sols, Route de St. Cyr, 78000 Versailles.
Delmas, M.A.B., INRA Laboratoire des Sols, Route de St. Cyr, 78000 Versailles.

Gatineau, M.L., CRSOI-CNRS, 16 Rue de la Ferrollerie 45045, Orléans Cedex.
Gauthier, Mme., Bibliothèque de l'E.N.S. des Mines 60, Bl.St.Michel, 75272 Paris Cedex 06.
Guendon, M. Jean-Louis, 16 rue Emile Zola, 13650 Meyrargnes.
Lamballerie, M.G. de, Centre Micoulau SNEA, Avenue de Président Anjot, 64001 Pau Cedex.
Leberre, M.P., BRGM Department Matériaux, BP 6009, 45018 Orléans Cedex.
Le Coustumer, Mme. M., Centre de Geomorphologie du C.N.R.S., Rue des Tilleuls, 14000 Caen.
Martin, M.M.J., Laboratoire de Chemie Minerale, Faculté de Pharmacie BP 403, 54001 Nancy Cedex.
Miskovsky, M.Jean-Claude, Université de Paris VI, Laboratoire de Geologie I, Tour 18 4e etage, 4 place Jussieu, 75230 Paris Cedex 05.
Montbeillard, M.F. de, Société Francaise de Céramique, 23 rue de Cronstadt, 75015 Paris.
Murat, M., Laboratoire de Chemie Appliquée, Bât 404, INSA de Lyon, 20 Avenue Einstein, 69621 Villeurbanne.
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Heling, Dr. D., University of Heidelberg, Postfach 103020, D-69-Heidelberg.
Kämpf, Dr. N., Institut für Bodenkunde, Technischen Universität München, 8050 Freising Weihestephan.
Valeton, Prof.Dr., I., Geologisch und Paläontologisch Institut, Bundesstrasse 55, D-2000 Hamburg 13.
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Hungary

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India

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Japan

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Kato, Dr. C., Department of Applied Chemistry Waseda University, 3-4-1, Okubo Shinjuku, Tokyo.
Kayama, Prof. J., 1728 Serge Tamaku, Kawasaki 214.
Matsukura, Dr. Y., Institute of Geoscience, University of Tsububa, Sahura Village, Nühari-gun, Ibaraki Prefecture.
Oinuma, Prof. K., Higasku-Jujo, 3-11-1-410 Kita-ku, Tokyo 114.
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Shinoda, Dr. S., 4-13-6 Yayoi-cho, Nakano-ku, Tokyo.
Tatematsu, Mr. H., Railway Technical Research Institute, J.N.R., 2-8-38, Hiraki-cho, Kokubunzi-shi, Tokyo.
Tsunashime, Dr. A., Dept. of Applied Chemistry, Fac. of Engineering, Hokkaido Univ., Sapporo 060.

Jugoslavia

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Aleksandrovic, Dr. M., Jaroslav Černi, Bul. Vojvoda Mišica 43, 11000 Beograd.
Krulc, Dr. Z., 41000 Zagreb 60/III.

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Zuñiga Muller, Ing.F.de, Lab.Manager, Postal 10-762 Apartado, Mexico 10, D.F.

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Wells, Mr. M., Soil Bureau D.S.I.R., Private Bag, Lower Hutt.

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Radan, Dr. S., Institute of Geology and Geophysics, 1 Caransebes Street, 78344, Bucarest 1.

Spain

Alvarez, Dr. F., Dep.Paleontologia Fac.Ciencias, Universidad de Oviedo, Oviedo.

Andrès, Dr. A. de, Instituto de Química Inorganica Facultad de Ciencias, Ciudad Universitaria, Madrid-3.

Cornejo, Dr. J., Centro de Edafologia, Apartada 1052, Sevilla.

Galan, Prof. E., Departamento de Cristalografía y Mineralogia Univ., Facultad de Ciencias, Zaragoza.

Garcia-Ramos, Dr. G., Departamento de Química Inorganica, Facultad de Ciencias, Universidad de Sevilla.

Hermosin, Dr. M.C., Centro de Edafologia, Apartado 1052, Sevilla.

Maqueda, Dr. C., Centro Edafologia, Apdo. 1052, Sevilla.

Torrent, Dr. J., Departamento de Edafologia, Escuela Technica Superiorde Ingenieros Agronomos, Apartado 246, Cordoba.

Switzerland

Strum, Dr. M., Federal Institut for Water Resources and Water Pollution Control, CH-8600 Dübendorf-Zürich.

Turkey

Ertem, Dr. G., Faculty of Istanbul, Vezneciler Istanbul.

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France

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Netherlands

Andriesse

Müller

United Kingdom

Foster, R.H.

Recent Deaths

Finland

Punakivi, K.

German Federal Republic

Correns, Prof. C.W.

Spain

Rodríguez, Prof. J.

Calendar of Meetings

1981

- March 29 - April 4: International Conference on Arid Soils, Jerusalem,
Israël (D.H.Yaalon, Dept. of Geology, The Hebrew
University of Jerusalem, 91000 Israël).
- April 8-10 : 3rd International Symposium on pesticides in soils,
Badajoz, Spain (Prof. C.Valenzuela, Dept. de
Química Inorgánica, Facultad de Ciencias, Univer-
sidad de Badajoz, Carretera de Elvas, s/n, Badajoz,
Spain).
- April 10 : Spring Meeting of the Clay Minerals Group of Great
Britain and Ireland, Cambridge, England (see page
13).
- June 24-26 : International Conference on Applied Mineralogy in
the Mineral Industry, Randburg, South Africa
(ICAM81, Private Bag X3015, Randburg 2125, South
Africa).
- September 6-12 : Seventh International Clay Conference, Bologna
and Pavia, Italy (see page 4).
- November 6 : Autumn Meeting of the Clay Minerals Group of Great
Britain and Ireland (see page 14).

1982

- February 8-16 : 12th International Congress of Soil Science, New
Delhi, India (Dr. T.D.Biswas, Organizing Secre-
tary 12th International Congress of Soil Science,
Indian Agricultural Research Institute, New Delhi
110012, India).
- March 29 - April 6: Symposium on Physical Chemical Properties of
Colloidal Particles: Colloidal Properties of Clays.
Las Vegas, U.S.A. (Prof. Ph.F.Low, Purdue Univer-
sity, Department of Agronomy, Lafayette In 47907).

- August 1-9 : Eleventh INQUA Congress, Moscow, U.S.S.R. (I.P. Kartashov, Geological Institute U.S.S.R. Academy of Sciences, Pyzewsky 7, Moscow 109017, U.S.S.R.).
- September : 12th Congress of the International Association of Sedimentologists, Hamilton, Ontario, Canada.
- December 1-6 : 4th International Congress of the International Association of Engineering Geology, New Delhi, India (Mr. Srivastava, K.N., 47-48 Pragati House Nehru Place, New Delhi 110019, India).

New Books

The Mineral Powder Diffraction File. Vol.1. Data Book. Vol.2. Search Manual by P.Bayliss, D.K.Smith, M.E.Mrose and L.G.Berry. JCPDS 1601 Park Lane, Swarthmore, PA 19081, U.S.A., 1980. Price U.S. \$ 395.00.

A total of 2.300 mineral species are represented by approximately 3.000 diffraction patterns. The data book is arranged in alphabetical order by mineral name. This arrangement allows the user to enter the Data book using the mineral name directly, and all patterns of a mineral species including polytypes, ordered and disordered states and chemical varieties are found together. The Search Manual contains a Hanawalt numerical direction, a Fink numerical section, a chemical section and an alphabetical section by mineral name.

P.Bayliss

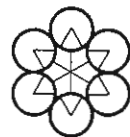
Advanced Chemical Methods for Soil and Clay Minerals Research, ed. J.W.Stücki and W.L.Banwart. Proceedings of the NATO advanced Study Institutes held at the University of Illinois, U.S.A., 1979. Department of Agronomy, University of Urbana-Champaign, Illinois, U.S.A., 1980, 477 pp. Price U.S. \$ 58.00.

Soils with variable charge, ed. B.K.G.Theng. Published by The New Zealand Society of Soil Science, c/o Soil Bureau, D.S.I.R., Private Bag, Lower Hutt, New Zealand, 1980, ca. 450 pp. Price \$ NZ 25.00 + postage, etc. (\$ NZ 3.00). \$ NZ 1.00 = approximately \$ US 1.00.

The publication of the book is being timed to coincide with the ISSS Conference on Soils with Variable Charge, February 1981 in New Zealand. The book, however, stands independent of the Conference Proceedings.

Geological Nomenclature, ed. W.A.Visser. Martinus Nijhoff Publishers B.V., The Hague, The Netherlands, 1980, 564 pp., 2nd revised and updated edition. Price U.S. \$ 95.00.

The Geological Nomenclature is a unique geological dictionary. It provides the key to geological terminology in five different languages: English, French, German, Spanish and Dutch.



ASSOCIATION INTERNATIONALE POUR L'ETUDE DES ARGILES
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