

## CONFERENCES

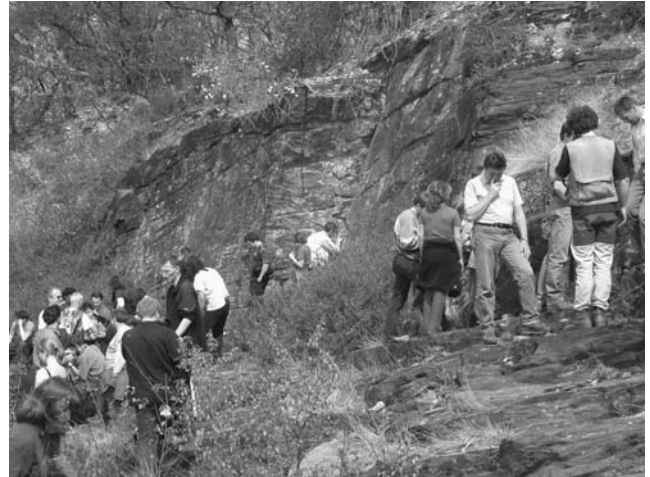
### The 8<sup>th</sup> meeting of the Czech Tectonic Studies Group and the 1<sup>st</sup> meeting of the Central European Tectonics Group, Hrubá Skála Chateau, Czech Republic, April 24–27, 2003

The Hrubá Skála meeting was the first meeting of the Central European Tectonics Group (CETG), which was established at the 6<sup>th</sup> meeting of the Czech Tectonic Studies group (CTS) in Želazno (April, 2002). The idea to establish the CETG was a natural consequence of the observed increasing attendance of the CTS meetings by Polish and Slovakian geologists. The mission of the CETG is to strengthen the professional communication and the coordination of activities of formal groups and individuals from the Czech Republic, Poland, and Slovakia in the field of tectonics and geodynamics. The main organizer of the meeting was the Geophysical Institute of the Academy of Sciences of the Czech Republic.

Prior to the conference, the participants went on an excursion transecting the České Středohoří Mts, one of two large Tertiary volcanic complexes developed in the Eger Rift. The České Středohoří Mts are ranked among the classical volcanic regions on a global scale, thanks to a systematic study done by Professor J.E. Hibsich (1852–1940). The field trip, led by J. Šmíd, K. Schulmann and F. Hrouda (Charles University, Prague), focused on the fabrics and structures of phonolite and trachyte volcanic bodies. The greatest attention was paid to the emplacement mechanisms, microstructure development and geochemical boundary conditions controlling the magma flow of selected volcanic domes.

Hrubá Skála Castle was the site of the conference proper. The castle, commanding the valley of the Libunka river, comprises several buildings erected on the tops of two 60-meter tall rocky towers connected to the nearby sandstone platform by a drawbridge. This venue was ideally suited for field excursions into the Bohemian Cretaceous Basin. It also gave the participants excellent views of the Český Ráj area.

The scientific program included 40 talks, including 9 given by Polish participants, and 66 poster presentations. The conference sessions covered a series of topics of interest, from geophysical research of crustal and upper mantle structure; through structural styles of sedimentary basin formation and inversion, microstructural clues to rheology and deformation history, and structural, petrological and geochemical clues to orogenic belt histories; to tectonic and climatic signals in sedimentary successions, and magma formation and emplacement in orogenic belts.



Participants of the meeting seeing the phonolite dome of Hradište u Habří – pre-conference trip.

There was also an open session for presentations that did not fit in these categories. As with previous conferences in this series, the breadth of topics covered and the quality of the technical papers presented ensured an excellent conference for all the delegates. The attendance was excellent throughout, with the last paper on the final afternoon still seeing 23 people in the audience. Also, there was a low number of the no-shows.

The meeting ended with a post-conference field trip to the Bohemian Cretaceous Basin, organized by D. Uličný, S. Čech and R. Grygar. Special emphasis was given to the relationships between the sedimentary infill of the Bohemian Cretaceous Basin and tectonic processes such as basin-floor subsidence and basin physiography, sediment supply, and possible eustatic forcing.

Overall, the conference was successful and provided a very focused forum on the issues of tectonics and geodynamics. Abstracts of all the presentations and a field trip guidebook were published in English in the 16<sup>th</sup> volume of “GeoLines” published by the Geology Division of the Academy of Sciences of the Czech Republic.

*Dawid Biatek  
(Wrocław University)*

### The “SHRIMP U-Pb zircon geochronology” Workshop, Wrocław, September 5–6, 2003

The “SHRIMP U-Pb zircon geochronology” Workshop took place in the Institute of Geological Sciences of Wrocław University on September the 5<sup>th</sup> to 6<sup>th</sup>, 2003, and was associated with the Jubilee Session: “30 Years of the undergraduate major *Mineralogy and Petrology* at Wrocław

University”. The chairman of the Honorary Committee, both of the Workshop and the Session, was Professor Alfred Majerowicz, the founder of petrology as a teaching subject at Wrocław University, the former long-standing head of the Department of Mineralogy and Petrology

(1972–1995), and the first tutor of the undergraduate major “Mineralogy and Petrology” at the University. Within the range of Professor Majerowicz’s scientific interests, there was particular focus on using zircons to solve petrogenetic problems. The morphology, morphometry and typology of zircons were applied to various petrological issues by a number of his MSc and PhD students, and by other colleagues in the Institute. A detailed knowledge of zircon is important in using this mineral in U-Th-Pb geochronology, including in the conventional evaporation method, as well as the SHRIMP (Sensitive High-Resolution Ion Microprobe) technique. The latter, which recently proved to be the most precise, has been developed since 1974 by the team of scientists at the Research School of Earth Sciences in Canberra, Australia. The SHRIMP is a kind of mass spectrometer with secondary ionisation (SIMS – Secondary Ionisation Mass Spectrometry), and it differs from other ion microprobes in having a very high sensitivity and the current best mass resolution available.

By contrast with the previous methods that analysed isotopic composition in multi-grain samples or in a whole single crystal, this extraordinary instrumental technique can determine isotopic composition in very small spots of a grain. Consequently, it enables us to measure the age of the old core of a crystal, as well as its younger overgrowths. In order to propagate a better awareness of the SHRIMP technique and its application, the “SHRIMP U-Pb zircon geochronology” Workshop was organized, with Dr. C.M. Fanning, Director of the Precise Radiogenic Isotope Services (PRISE) from the Research School of Earth Sciences in Canberra, as a key invited speaker.

The opening of the Workshop was led by Professor A. Witkowski, the Dean of the Faculty of Natural Sciences of Wrocław University, and Professor J. Puziewicz, the Deputy Director of the Institute of Geological Sciences. Afterwards, Professor R. Kryza, the head of the Department of Mineralogy and Petrology and a member of the Organizing Committee, introduced the invited lecturers: Dr. C.M. Fanning (Canberra), Prof. J.M. Montel (Toulouse) and Prof. B.K. Lvov (St. Petersburg).

The first key lecture, “SHRIMP U-Pb zircon geochronology – possibilities and limitations” was given by C.M. Fanning, who outlined the principles and research possibilities of the developing models of the instruments: SHRIMP I, SHRIMP II and SHRIMP-RG (Reverse Geometry). The newest models, which have a much higher resolution and sensitivity than their prototypes, have been adapted to isotopic mapping and provided with moving multiple collector and dual primary ion sources. Their reverse geometry significantly reduced their refocusing aberrations. With the SHRIMP, we can date not only zircon but also other minerals such as monazite, sphene, perovskite, rutile, cassiterite and baddeleyite.

The second lecture, “Electron microprobe dating of monazite: advantages and limitations”, from a study by R. Kryza, N. Charnley, J.M. Montel, B.K. Lvov, K.S. Sveshnikov and A.S. Voinov, was delivered by R. Kryza. The Electron Microprobe (EMP) dating of monazite does not require the analysis of isotopes, only of the bulk con-

tents of the “parent” and “daughter” elements. The EMP method is easily accessible and cheaper than the SHRIMP, and it permits the dating of a few minerals *in situ*, i.e. in their original textural position in a standard rock thin section. The lecture showed examples and laboratory procedures of current comparative studies performed in Oxford and Wrocław, on the Precambrian granites of Ukraine and Karelia.

The next presentation was not originally included in the programme. Given by B.K. Lvov, it was devoted to selected petrological issues, and the classification and age dating problems of granitoids, based on examples from the Urals and the Baltic Shield.

In the Friday afternoon working session of the Workshop, C.M. Fanning presented the methodological interpretative possibilities of the SHRIMP zircon dating developed by the research team: C.M. Fanning; R.J. Pankhurst (Keyworth, the United Kingdom); C.W. Rapela (La Plata, Argentina) and F. Herve (Santiago, Chile): “Unravelling complex SHRIMP U-Pb zircon ages in Palaeozoic and Mesozoic magmatic rocks: fact or artefact. Bimodal U-Pb distributions: the twin peaks of Kilimanjaro?”. In this presentation, possible sources of bimodal U-Pb age distributions visible on the graphs were discussed: the orientation chemical bias; the loss or inheritance of radiogenic Pb; the analysis of a complex reference zircon; and the sampling of zoned igneous zircons representing different magmatic events.

In the next practical part of the Workshop, J.M. Montel and R. Kryza addressed various questions concerning the EMP dating of monazite, in particular data treatment and interpretation.

The essential limitation in using the SHRIMP is its relatively high cost. However, in many cases, it is worth paying more in order to receive reliable U-Pb data, when other methods fail, especially in dating zircons from clastic rocks, paragneisses and granulites, particularly from kincigites, orthogneisses and S-type granites with a great amount of inheritance in zircons, and fragments of old continental core, with the so-called “refractory zircons” bearing records of the oldest tectono-thermal events. EMP dating of monazite is a convenient, comparatively cheap, and easily accessible method, which in some cases can complement the SHRIMP dating of zircons, e.g. when tectono-thermal events do not lead to the development of zircon, but in turn give rise to crystallization of monazite.

On the second day in the morning, the Workshop was conducted in smaller groups led by the invited scientists, C.M. Fanning, J.M. Montel and B.K. Lvov. The participants could also attend to a seminar by K. Turniak from the Institute of Geological Sciences, Wrocław University: “Zircon: from the rock to the mass spectrometer”. After the morning sessions, there was a possibility to attend a tour to the Collegium Maximum of Wrocław University, led by prof. A. Grodzicki.

On Saturday afternoon, the Jubilee Session was held. Among the participants, current and former members of the staff of the Department of Mineralogy and Petrology and the Department of Gemmology and the Mineralogical

Museum were present, including two honour guests: Professor Janusz Janeczek, the President of the Silesian University in Katowice, and Professor Stanisław Lorenc, the President of Adam Mickiewicz University in Poznań. The 30-year history of the undergraduate major of Mineralogy and Petrology at Wrocław University was commemorated in a special talk by Professors A. Majerowicz and R. Kryza. During its 30 years (up to 2004), the major was graduated by more than 200 students. Many of them have been successful in their scientific careers, obtaining PhDs and tenureships at universities in Poland and other coun-

tries (e.g. Switzerland, USA). The jubilee presentation was followed by a friendly social meeting.

The Workshop provided an opportunity to discuss many important theoretical and practical aspects of modern SHRIMP and EMP geochronology and to strengthen links and cooperation between scientists and teams from Polish scientific institutions and research centres abroad. The Jubilee Session presentation and materials were printed in a special brochure edited by R. Kryza.

*Krzyszyna Klimas, Secretary of the Workshop  
(Wrocław University)*

### The Meeting of the Mineralogical Society of Poland and the Conference "The Prospects and the Progress of the Mineralogical Sciences in Poland", Cieszyn, September 19–21, 2003

The joint meeting of the Mineralogical Society of Poland and the Conference "The Prospects and the Progress of the Mineralogical Sciences in Poland" were held in Cieszyn on September 19<sup>th</sup> to 21<sup>st</sup>, 2003. Both were organized by the Mineralogical Society of Poland and the Faculty of Earth Sciences of the Silesian University in Sosnowiec. The meeting and the conference were attended by over fifty geologists, mineralogists and petrologists from many Polish scientific institutions. Professor Janusz Janeczek, the President of the Silesian University, opened the conference and showed the role of the Silesian University in the development of mineralogical sciences in Poland. The inaugural lecture was given by Professor Andrzej Manecki, who characterized the main areas of interest and directions of development of the modern mineralogical sciences and their connections with petrology and geochemistry.

After the opening talk, the lectures were conducted in two separate sessions, one devoted to petroarchaeology, petroarchitecture and applied (technical) mineralogy, and the second to classical mineralogical and petrological problems. In the first session, a range of talks were given. A. Majerowicz spoke on the petroarchaeology of stony artefacts, and P. Gunia gave a talk on serpentinite stone tools from the Neolithic. A. Grodzicki, G. Kryza, R. Kryza, H. Walendowski gave a presentation on the past and recent usage of building stone in the construction and repair of Wrocław University. J. Trąbska spoke on burnt artefacts from the Chmielów necropolis. Other presentations were devoted to applied mineralogy, including clay technology and investigations and coal organic matter. Apart from that, selected problems of geophysics were presented by M. Kądziołko-Hofmokr and co-workers, and of geochemistry by W. Lis and A. Pasieczna.

In the second session, the results of various mineralogical and petrological studies were presented, and information was given on research techniques and innovations. A number of presentations dealt with the mineralogy of



Participants of the Cieszyn 2003 Meeting (by courtesy of the Mineralogical Society of Poland)

gemstones (diamonds, emeralds, spinels), using Raman spectroscopy, isotope techniques, fluid inclusions in minerals, and other methods. Several further talks covered petrological problems of igneous and sedimentary rocks. This session was completed with a very interesting talk by Ł. Karwowski about the mineralogy of the Łowicz meteorite.

In the poster session, several tens of presentations were shown, covering various aspects of mineralogy, petrology and geochemistry. The associated social events during the meeting included a wine party, with medieval and classical music, in the historical scenery of the Arts Faculty of Silesian University in Cieszyn.

The post-conference field excursion was conducted by R. Włodyka, who showed interesting exposures of small sills of teschenites in their type area in the Olza Valley near Cieszyn. The organisation of the meeting and field excursion was excellent, ensuring a pleasant atmosphere for the scientific and informal discussions. The abstracts of all presentations were reviewed and published in the 22<sup>nd</sup> volume of Special Papers of the Mineralogical Society of Poland.

*Piotr Gunia  
(Wrocław University)*

## The 10<sup>th</sup> Meeting of the Petrology Group of the Mineralogical Society of Poland, Głucholązy, October 17–19, 2003

The 10<sup>th</sup> meeting of the Petrology Group of the Mineralogical Society of Poland was held in Głucholązy on the 17<sup>th</sup> to 19<sup>th</sup> of October 2003 and was organized by Wrocław University. The first two days of the conference comprised the talks and evening poster sessions, with an opening jubilee session dedicated to the 30<sup>th</sup> anniversary of the establishment of mineralogy and petrology as an undergraduate major at the University of Wrocław. The meeting ended with a field trip covering the Žulová Pluton and the rock series of its cover.

Since the first meeting of the Petrology Group in 1994, the interest in the conference has steadily grown; a decade later, it is a truly international affair. The conference in Głucholązy attracted around sixty participants including foreign guests from geological centres in the Czech Republic (Charles University in Prague, the Czech Geological Survey, Masaryk University in Brno), Egypt (Alexandria University), Germany (Georg-August-Universität in Göttingen, the University of Hannover) and France (the LASEH University of Limoges), as well as over fifty contributors from Poland (the Polish Academy of Science, the Museum of the Earth in Warsaw, the Polish Geological Institute, the Central Mining Institute in Katowice, Adam Mickiewicz University in Poznań, the Jagiellonian University, the University of Silesia, Warsaw University and Wrocław University).

The meeting was ceremoniously opened by Professor Jacek Puziewicz, the chairman of the Petrology Group, from the Institute of Geological Sciences of Wrocław University. The first talk of the jubilee session was given by Professors Ryszard Kryza and Alfred Majerowicz ("30 years of the undergraduate major *Mineralogy and Petrology* and an outline of petrological studies at Wrocław University after 1945"), while the following speeches of this session presented some chosen problems which are currently dealt with by scientists of the Department of Mineralogy and Petrology of Wrocław University.

Over the first two conference days, twenty-five talks were given, many of them dealing with acidic rock petrogenesis. A brief overview of the current knowledge on the Variscan structural complex of the Sudetic area was presented by Stanisław Mazur and Paweł Aleksandrowski (Wrocław University), the contemporary models of oceanic plagiogranite formation were compared by Jürgen Koepke and Sandrin T. Feig (the University of Hannover,

Germany) and the impact of former metallic mines on the environment was discussed by Hubert Brill (the University of Limoges, France). Other presentations covered a broad spectrum of mineralogical, petrological, geochemical, geophysical and structural geological topics. Similar topics were also covered in the evening poster sessions, during which over thirty presentations were displayed by both foreign and Polish participants. The posters presented the results of scientific investigations from such variable research areas as the Sudetes, Upper Silesia, the Kraków area, the Tatra Mts., the Outer Carpathians, northern and north-eastern Poland, Romania, Egypt (the South Eastern Desert), the U.S.A (Kansas) and the Antarctic Peninsula.

Both the main sessions and poster presentations offered an excellent opportunity for discussion. All the participants had a chance to become acquainted with a wide variety of research problems and methodological aspects of geological sciences. The social evenings provided an opportunity for the participants to network and become acquainted with one another.

Abstracts of all the oral presentations and posters were published in the 23<sup>rd</sup> volume of the Special Papers of the Mineralogical Society of Poland.

On the last day of the conference Jacek Puziewicz and Vladimír Žáček (Czech Geological Survey) led a field trip to look at the eastern cover of the Žulová Pluton. The participants were shown three points, one on the Polish side and the next two on the Czech side of the border: the Kamienna Góra quarry, where the apical parts of the pluton and its gneissic cover outcrop; Kamenny vrch, with quartzites containing pumpellyite-actinolite facies minerals; and Bukovice, where amphibolites typical of the Žulová Pluton cover are exposed.

On the second day of the conference, the annual meeting of the Council of the Petrology Group of the Mineralogical Society of Poland took place. During the meeting the new Board was established with Dr. Marek Michalik from Jagiellonian University as the chairman. The new Board thanked the former chairman Jacek Puziewicz for his many years of fruitful work and decided that the next session would be held in Ustroń, on the 14<sup>th</sup> to 17<sup>th</sup> of October, 2004, and would be devoted to the hypabyssal magmatism and petrology of the flysch in the Western Carpathians.

Joanna Kostylew  
(Wrocław University)

## "Geological and Mineralogical Museums – Historical and Contemporary Aspects" A Conference Held in Wrocław, June 4, 2004

The conference "Geological and mineralogical museums – historical and contemporary aspects" took place in the Faculty of Geological Sciences of Wrocław University on the 4<sup>th</sup> of June 2004. The meeting was jointly organized by the Commission of Earth Sciences of the Wrocław

Branch of the Polish Academy of Sciences, the Mineralogical Museum of the Faculty of Geological Sciences of Wrocław University (headed by Professor Michał Sachanbiński), and the Geological Museum of the Faculty of Geological Sciences of Wrocław University (headed by

Professor Andrzej Grodzicki). The conference was attended by many geologists interested in the problems of geological museums, with over 50 participants from many scientific centres and from 13 Polish and 2 Czech museums devoted to geology and mineralogy. Among prominent participants were the Vice-President of Wrocław University, Professor Jan Kołaczek, the Director of the Institute of Geological Sciences of Wrocław University, Professor Stanisław Staško, and the Head of the Wrocław Branch of the Polish Geological Institute, Dr. Andrzej Stachowiak.

It is noteworthy that this was the first conference of this rank, devoted to various aspects of geological and mineralogical museums in Poland and abroad, and that it attracted not only specialists but also a number of amateurs who attended numerous the conference sessions.

The sessions, led by Andrzej Grodzicki and Michał Sachanbiński, encompassed a wide spectrum of problems related to the main theme. Vivid discussion was provoked, especially by Krzysztof Jakubowski, who gave a talk on traditional and modern trends in exhibitions in geological museums in Europe. Further illustration of this issue was given by Tomáš Řidkošil, a guest from the Czech Republic, with the case of the Czech Paradise Museum in Turnov. Historical issues were broached by a number of participants. Janusz Skoczylas presented archive materials on historical collections of the Society of Friends of Sciences in Poznań. Ilona Jaworska from the Wałbrzych Museum acquainted the audience with a collection of Carboniferous plants and its founder, Eufrozyn Sagan, while Andrzej Wójcik presented and discussed an unknown historical document regulating the collection of specimens from coal mines. A hot debate followed the speeches dealing with the issue of new conventions in museum presentations: "The importance of the Internet in the educational activities of the Geological Museum of the Polish Geological Institute" (Monika Krzeczyńska, Włodzimierz Mizerski and Izabela Ploch) and "The interdisciplinary exhibitions of the Geological Museum in Kielce" (Jolanta Studencka). The dilemma of the relative importance of

form and content in modern exhibitions was discussed by Zbigniew Strzelecki. Marcin Krystek informed the participants of a newly opened exhibition in the Geological Museum at the Geographical Sciences Department of Łódź University dealing with the role of crystals in environmental and technical sciences. The Geological Museums of Szczecin University and the Museum in Złotoryja were presented by Bernard Cedro and Joanna Kielar, respectively. Antoni Stryjewski, a deputy to the Polish Parliament, spoke on the important issue of the necessity of revising the present status of employees of geological museums attached to high schools and research centres in Poland.

The presentations of the history and present day activities of the Mineralogical and Geological Museums at the Institute of Geological Sciences of Wrocław University were followed by tours to the museums led by Prof. Sachanbiński and Prof. Grodzicki. In the Geological Museum, a special interest was drawn to the exhibition devoted to the theory of the expanding Earth and by a display concerning problems with the Ślęza ophiolite. The latter was thoroughly discussed by Prof. Alfred Majerowicz.

On the day preceding the conference, the participants were offered the possibility to visit the exhibitions of minerals and meteorites in the Branch of the Mineralogical Museum of Wrocław University, located in the cellars of a historic building in Kuźnicza Street in Wrocław. The participants were then guided to the Main Building of Wrocław University, one of the most spectacular architectural monuments in Wrocław. Its history and architectural details were described by Prof. Grodzicki, who put a special emphasis on the role of stone in the construction and adornments.

The conference was closed with a social meeting in the Mineralogical Museum of Wrocław University. The meeting, spent in a friendly and unofficial atmosphere, provided an excellent opportunity to exchange experience and to make plans for further cooperation.

*Andrzej Grodzicki & Antonina Pacholska  
(Wrocław University)*

## **The Meeting of the Clay Group of the Mineralogical Society of Poland, Wrocław, June 18–19, 2004**

This meeting took place in the Institute of Geological Sciences of Wrocław University, on the 18<sup>th</sup> and 19<sup>th</sup> of June, 2004. It was the third time a professional forum of the Polish Clay Group had been held in Lower Silesia. The previous national conferences to have been organized there were Clay and Clay Minerals, and Raw Materials, respectively held in 1977 and 1993.

The Polish Clay Group is a part of the Mineralogical Society of Poland and was set up in 1973. Its founder, and its chairman of many years' standing, was Prof. Leszek Stoch from the AGH University of Science and Technology in Kraków. The chair is currently held by Dr. Czesław August of Wrocław University. The Clay Section

consists of 37 people representing various disciplines, dealing with clays and clay minerals. Since 1998, the Polish Clay Group has been a member of the European Clay Groups Association (ECGA), and in 1999, it was a founder member of the MidEuropean Clay Groups Association (MECGA), along with the societies from Slovakia, Hungary and Croatia. Prof. Jan Środoń of the Polish Academy of Sciences in Kraków was elected the chair of the ECGA for the term 2003–2007 Kraków; he was one of the driving forces behind the founding of the MECGA.

The 2004 Meeting in Wrocław was run in workshop form, in keeping with the tradition initiated by the previous chairman of the Clay Group, Prof. Krzysztof Bahra-

nowski,. At the meeting, the invited guests presented four 45-minute reports on current research directions in Polish scientific centres.

The participants were welcomed by the Director of the Institute of Geologic Sciences of Wrocław University, Prof. Stanisław Staśko, and by the Chairman of the Wrocław Branch of the Mineralogical Society of Poland, Prof. Alfred Majerowicz. The central concept for this meeting of Polish argilologists was outlined by the Chairman of the Polish Clay Group, Dr. Czesław August.

In the first part of the Conference, the following papers were presented:

- A. Wiewióra, A. Wilamowski (PAN Warsaw): "Crystal chemistry of talc";

- K. Bahranowski (AGH Kraków), E. Serwicka (PAN Kraków): "Layer-structure clay minerals as catalysts and catalyst-precursors".

After the lunch break, two further talks were given:

- J. Długosz (Agriculture-Technical University, Bydgoszcz): "Clay minerals in soils developed on glacial gravels";

- E. Dubińska (Warsaw University), P. Bylina (PAN Warsaw): "The chlorite-smectite mixed-layer: identification, occurrence and origin".

The essence of the talks was the development in soil and clay science and the research that is still needed. On account of the development in analytic methods, crystal chemistry studies of layer silicates are one of the most central trends in contemporary mineralogy. They are widely used in determining the conditions of origin of clay minerals in geological environments. It is worth emphasizing that Prof. Andrzej Wiewióra is among the internationally renowned authorities in the field of crystal chemistry of clay minerals. Another recent research field is intentional interference into the structure of layer silicates (nanotechnology), which is being successfully developed in the AGH University of Science and Technology in cooperation with the Institute of Catalysis of the Polish Academy of Sciences in Kraków. It allows researchers to obtain a new generation of catalysing materials. However, there is still an area that presents an extremely difficult challenge that requires the cooperation of crystal chemistry and soil science researchers, and that is the identification of the essential elements of soil, such as clay minerals. The mineralogy of soils has been one of the main scientific interests of the Clay Group since its founding; it was first developed as a research division in the Agricultural University in Wrocław, and it is now also studied in the Technical Academy in Bydgoszcz. Methodological problems concerning the identification of mixed layer clay minerals, especially common in soils and influencing their quality, are being successfully solved in Warsaw University and the Institute of Geological Sciences, Polish Academy of Sciences in Warsaw. An important achievement of this joint team was a critical analysis of experimental results and their interpretation on the background of the conditions

of origin of clay minerals with mixed-layer structure.

In the afternoon, there was a poster session presenting the following papers:

- A. Wiewióra, J. Drapała, J.L. Perez-Rodriguez: "Modification of the thermal behaviour of kaolin clays by ultrasonics";

- J. Drapała, A. Wiewióra, J.L. Perez-Rodriguez: "The effect of sonication on the particle size distribution of kaolinite";

- K. Górniak, K. Bahranowski, A. Gawęł, M. Muszyński, A. Protas, T. Ratajczak, T. Szydłak: "Volcanogenic black shales in the Dinantian of the Pomeranian Variscides (North-Western Poland)";

- K. Górniak, M. Wagner, A. Gawęł, M. Muszyński, T. Ratajczak, T. Szydłak: "The thermal history of Palaeozoic source rocks in Western Pomerania (NW Poland): Illite/smectite and vitrinite reflectance geothermometers";

- K. Górniak: "The source of the clay component of the Upper Cretaceous marls of the Subsilesian Unit of the Polish Flysch Carpathians";

- C. August: "Smectites in vesicles of the alkali basalts in Lower Silesia, SW Poland";

- C. August: "A mineralogical and petrographical study of the weathering crust on the Ślęza gabbro, SW Poland".

After the poster session, the participants had an opportunity to visit the rich collection of minerals and rocks in the Mineralogical and Geological Museums of Wrocław University.

In the evening, there was a round-table forum, during which the participants discussed the then-upcoming Mid-European Clay Conference in Miskolc (Hungary) in September, 2004, as well as the program of the next meeting in 2005.

After the forum, the participants took part in an evening walk to the historical city centre of Ostrów Tumski. More thematic sightseeing of historical places in the centre of Wrocław was organized on the second day of the meeting, with special attention paid to the usage of building stones in old buildings and monuments. The meeting ended with an excursion to the 300-year old University Main Hall, *Leopoldinum*. Both excursions were led by Prof. Andrzej Grodzicki, accompanied by Agnieszka August-Zarebska.

The Polish argilologists' meeting was attended by 27 people, including 17 members of the Mineralogical Society of Poland. For participants from different parts of Poland, the stay in Wrocław, a city of unique ambience and history, was a very interesting experience, and both the session and the excursions proved to be perfectly prepared.

As has become traditional, the event was sponsored by the Stanisław Staszic Scientific Association in Kraków.

Katarzyna Górniak  
(AGH University of Science and Technology in Kraków)

## The 19<sup>th</sup> Conference of Palaeobiologists and Biostratigraphers of the Polish Geological Society: “The Palaeontological Record as an Indicator of Palaeoenvironments” Wrocław, September 16–18, 2004

The 19<sup>th</sup> Conference of Palaeobiologists and Biostratigraphers of the Polish Geological Society took place in Wrocław on the 16<sup>th</sup>–18<sup>th</sup> of September, 2004. The meeting was co-organised by the Department of Stratigraphical Geology and the Department of Palaeobotany of the Institute of Geological Sciences, and the Institute of Zoology (Department of Palaeozoology) of the University of Wrocław. The conference was dedicated to the 300<sup>th</sup> anniversary of the University of Wrocław. The Organising and Scientific Committee consisted of Prof. Teresa Wiszniowska (chairperson), Prof. Anna Sadowska, Dr. Joanna Haydukiewicz, Dr. Jolanta Muszer (secretary), and Dr. Krzysztofa Usnarska-Talerzak (treasurer).

It is worth mentioning that the First Conference of Palaeontologists was also held in Wrocław, in 1974. In 2002, at the 18<sup>th</sup> Conference of Palaeontologists in Poznań, the Section of Palaeontologists changed its name to the Section of Palaeobiologists and Biostratigraphers, and decided that subsequent meetings would take place every second year.

The 19<sup>th</sup> Conference began with a meeting of the Section of Palaeontologists and Biostratigraphers. The report from the 18<sup>th</sup> Conference, held in Poznań, was accepted and a new Board of the Section was chosen. Also, the accession of the section to the International Palaeontologists Association was established. All participants agreed that the next, 20<sup>th</sup> conference should be organized in 2006 by our colleagues from Warsaw.

There were participants from many of Poland’s academic and scientific centres and from the University of Vilnius. Their significant number (64 people) was proof of the importance of the issues being presented. The Conference was devoted to the integration of stratigraphic and palaeontological research and focused on the importance of the palaeontological record in palaeoenvironmental reconstructions, interactions between organisms and their biotops, and the understanding of fossil communities. The lectures and posters covered a broad range of issues.

On the first and second days, there were both talks and poster presentations. Two guest lecturers, Prof. Grzegorz Racki with “A record of environmental changes during global ecological catastrophes” and Prof. Stanisław



Participants in the university yard in front of the library building.  
(Photo A. Boczarowski)

Skompski with “Palaeoenvironments of the Viséan carbonate platforms in southern Poland”, provided a general introduction to the plenary sessions. The other presentations dealt with conodonts, foraminiferans, corals, molluscs, brachiopods, arthropods, echinoderms, vertebrates, flora, palynomorphs and ichnofossils. In total, 37 talks were given and 19 posters were shown. Abstracts of all the presentations and field trips descriptions were printed in a special conference volume.

Two field trips to the Sudetes were held on the third day of the Conference. The first trip was devoted to the palaeontological record in the Niedźwiedzia Cave of the Śnieżnik massif. During the trip, exposures of Upper Devonian (Dzikowiec) and Upper Viséan (Paprotnia) of the Bardo Mountains were also visited and their lithological and palaeontological records were presented. Selected exposures of the Permian, Middle Triassic and Miocene of the North Sudetic Depression were presented during the second trip. Both field trips were led by scientists from the University of Wrocław.

The scientific and social sides of the meeting together made it as fruitful and successful as the former ones.

Jolanta Muszer  
(Wrocław University)

## The IGCP 497 Opening Meeting “The Gondwanan Margin of the Rheic Ocean in the Bohemian Massif”, Prague, September 17–25, 2004

The opening meeting of the IGCP 497 project was organised by P. Kraft (Prague), U. Linnemann (Dresden), S. Mazur (Wrocław) and K. Drost (Dresden) in Prague on September 20<sup>th</sup>, 2004. It was preceded by a pre-conference trip “The remnants of the Rheic Ocean floor in the Sudetes” (Sept. 17–19, 2004) led by R. Kryza, S. Mazur and P. Aleksandrowski (all from Wrocław), and it was followed by a post-conference trip “The remnants of the Rheic

Ocean floor in the Tepla-Barrandian, the Moldanubian and the Saxothuringian Zones” (Sept. 20–25, 2004) led by P. Kraft (Prague), J. Kachlik (Prague), U. Kroner (Freiberg), K. Drost (Dresden), U. Linnemann (Dresden). The meeting gathered around 25 scientists from several countries, including Germany, the Czech Republic, Spain, Portugal, France, Canada, the USA and Poland. A number of scientific presentations were devoted to opening and clo-

sure of the Rheic Ocean, the latter coeval with the accretion of the Variscan Orogen. Other than the scientific programme, the meeting provided a unique forum for the exchange of ideas, setting up lines of future collaboration and the discussion of possible joint research projects. All these future activities will be supported by the IGCP scheme and will hopefully contribute to the final achievement of the project's goals.

The scientific aim of the project is to make a detailed investigation of the origin and evolution of the Rheic



The Participants of the Opening Meeting of IGCP 497, Prague, September 20th, 2004.

Ocean, which is generally held to have opened between Gondwana and a number of terranes that rifted from the Amazonian-West African margin of Gondwana. Its growth occurred at the expense of the Iapetus Ocean and its closure brought Gondwana into collision with Laurussia during the assembly of Pangea. But despite its importance during the Palaeozoic, the history of the Rheic Ocean has not hitherto received enough attention due to several uncertainties in the identification of its rifted margins, in the timing of its initial rifting and rift-drift transition, in its size and geography, and in the geodynamics of its final closure. The reason for these uncertainties is the broad geographic area to which the regions of Rheic geology were scattered following the breakup of Pangea, including North and Central America, Western, Central and Eastern Europe, and North and South Africa. In order to overcome the lack of communication emerging from the geographical separation, the project is attempting to bring together scientists from each of these areas in order that a more comprehensive understanding of the evolution of this important ocean can be achieved. The fields of expertise involved are stratigraphy, sedimentology, palaeontology, igneous and metamorphic petrology, geochronology, geochemistry, structural geology, tectonics, palaeogeography, palaeoceanography and geophysics. More information about IGCP 497 can be obtained from its web page at <http://www.snsd.de/igcp497>.

*Stanisław Mazur (Wrocław University)*

*& Ulf Linnemann (Museum of Mineralogy and Geology, Dresden)*

### **The International Workshop on the Petrogenesis of Granulites and Related Rocks, Náměšť nad Oslavou, Czech Republic, October 1–3, 2004**

The International workshop on the petrogenesis of granulites and related rocks was held in Náměšť on October 1<sup>st</sup> to 3<sup>rd</sup>, 2004. Náměšť is a little town of 5200 inhabitants located on the banks of the Oslava River, around 40 km west of Brno. The most distinctive feature of the town is the Gothic castle high above the river. It was built in the mid-thirteenth century and subsequently rebuilt into a Renaissance-style chateau which is now a dominating landmark of the town. The conference lectures, most of the organized social events, and the accommodation for many of the participants were all within the chateau walls. The meeting was organized to commemorate the 250<sup>th</sup> anniversary of the first scientific description of a granulite. Its author, Johann Heinrich Gottlob von Justi (1717–1771) was an interesting personality, at once an economist, a natural scientist and an adventurer. He worked for Graf Friedrich Wilhelm Haugwitz, who owned the chateau.

The workshop was co-organized by the Moravian Museum in Brno, the Czech Geological Society, the Division of Mineralogy and Material Science of the University of Salzburg, and the State Chateau Náměšť nad Oslavou. During the opening talk, the history of Johann Heinrich Gottlob von Justi and the first scientific description of the granulites were explained to the participants. The meeting

was attended by over 30 participants, including 15 from the Czech Republic, 5 from Germany, 2 each from Poland, Austria, Australia and the USA, as well as 1 each from Slovakia and Great Britain. Two keynote lectures, "Granulites formed at eclogite facies conditions" by Patrick O'Brien and "Temperature and time: key challenges in UHT metamorphism" by Simon Harley, commenced the scientific part of the meeting. They were followed by 20-minute contributions presented by various participants covering a wide range of topics related to granulite research, such as the mechanism and duration of the Variscan granulite-facies metamorphism in the Bohemian Massif; P-T-t paths from (U)HP rocks and their bearing on tectonic models of Central European Variscides; and the genesis of felsic Moldanubian granulites, the character of their protolith(s) and the changes occurring during their metamorphism. These shorter presentations also included talks on the partial melting in granulite facies and the genetic link between Variscan granulites and granites; the behaviour of various geochronometers, protolith ages and cooling ages related to granulite-facies metamorphism; and the whole-rock geochemistry and isotopic composition of Moldanubian granulites and changes related to Variscan metamorphism.

The post-conference excursion was devoted to the



granulites of the Náměšť Massif and the surrounding rocks. Vojtěch Janoušek (University of Salzburg) presented variously retrogressed felsic granulites of the Náměšť Massif in the locality which was originally described by Johann Gottlob von Justi. Gordon Medaris (University of Wisconsin-Madison) and Emil Jelinek (Charles University, Prague) showed peridotites enclosed in Náměšť granulites interpreted as a fragment of suboceanic mantle. František Holub (Charles University, Prague) showed potassic rocks (“durbachites”) of the Třebíč Pluton spatially and temporally associated with the granulites. Finally, Jaromir Leichman (Masaryk University, Brno) presented alkali feldspar syenites located adjacent to the Náměšť granulites.

The perfect organisation and lovely scenery of the attractive park surrounding the chateau stimulated a friendly atmosphere. Additionally, the high-quality scientific presentations led to many fruitful discussions and contributed to the great success of the workshop.

*Jacek Szczepański*  
(Wrocław University)



Participants during the post-conference excursion south of Mohelno. G. Medaris explains the Mohelno peridotites.

### The 11<sup>th</sup> Meeting of the Petrology Group of the Mineralogical Society of Poland, Ustroń, October 14–17, 2004

In 2004, the annual meeting of the Petrology Group of the Mineralogical Society of Poland took place in Ustroń on the 14<sup>th</sup> to 17<sup>th</sup> of October. This conference was organized by the Silesian University in “Leśnik”, a very picturesque centre of ecological education. The programme for the meeting covered two days of talks and poster presentations, and a field trip on the final day. The conference was opened by the chairman of the Petrology Group, Dr. Marek Michalik from the Jagiellonian University, and a speech was given by Professors Janusz Janeczek and Łukasz Karwowski presenting the history, achievements and present dealings of the Faculty of Earth Sciences and the Department of Geochemistry, Mineralogy and Petrology at the Silesian University, as the meeting was organized on the 30<sup>th</sup> anniversary of the foundation of the Faculty.

Apart from numerous (86) participants from Polish geological research centres, including the Polish Academy of Sciences, the Polish Geological Institute, the Stanisław Staszic University of Mining and Metallurgy in Cracow, the Jagiellonian University, the Silesian University in Sosnowiec, Warsaw University and Wrocław University, a few foreign guests from Ireland (University College Dublin) and the Slovak Republic (Constantine the Philosopher University in Nitra and Slovak Academy of Science) also attended the meeting. The focus of the conference was on the problem of hypabyssal magmatism and the petrology of the flysch in the Western Carpathians, thus many of the oral presentations were devoted to problems concerning the petrology, geochronology and geochemistry of this region. The main conference topic was introduced by invited lecturers Jan Spišák from the Slovak Academy of Science and Dušan Hovorka from the Constantine the Phi-

losopher University in Nitra who gave the talk “Teschchenite clan rocks and their possible analogues in the Western Carpathians”, and Roman Włodyka and Łukasz Karwowski from the University of Silesia who spoke on “The alkaline magmatism from the Polish Western Carpathians”. The research problems presented during the conference sessions covered a broad spectrum of various geological issues in the fields of petrology, geochemistry, mineralogy and geochronology. For instance, the leading topic of the conference was spoken on in greater detail by Jan Golonka and co-workers, with a presentation on Mesozoic volcanism in the Eastern Carpathians, and by Padhraig S. Kennan from University College Dublin (Ireland), who discussed the relationship of various geological features in the Western Sudetes to the hydrothermal circulation in the oceanic crust during the Late Silurian to Early Devonian period.

During the first two days of the conference, over thirty talks were given and over fifty posters were displayed. For the first time, the poster sessions were preceded by short introductions given by the posters’ authors. The session was also an excellent opportunity for a vivid discussion. Abstracts of all the oral presentations and posters were published in the 24<sup>th</sup> volume of the Special Papers of the Mineralogical Society of Poland.

The regional background of the field trip which was held on the third day was presented by Marek Cieszkowski from Jagiellonian University (“The Outer Carpathians – general geology”) and the details were given by Roman Włodyka. The field trip was led by Marek Cieszkowski and Roman Włodyka and covered three points: Rudów (Zamarski) near Cieszyn with the outcrop of a teschenite sill contacting sediments; Cisownica Hill, where

the Cieszyn Limestones can be seen; and an abandoned quarry in Ustroń where the Godula sandstone beds are exposed.

In spite of the rich scientific programme, there was

time for social evenings which, thanks to the friendly atmosphere, were exceptionally good occasions for unofficial discussions.

*Joanna Kostylew  
(Wrocław University)*

### **“Geo-Filtration”: A Scientific Session on Groundwater Flow Modeling, Wrocław, October 24–25, 2004**

The scientific session on groundwater flow modeling “Geo-Filtration” took place in the buildings of the Faculty of Geological Sciences, Wrocław University, on October 24<sup>th</sup> to 25<sup>th</sup>, 2004. The meeting was organized by two departments of the Faculty: the Department of General Hydrogeology and the Department of Applied Hydrogeology. The Session gathered around 50 specialists and users of numerical modeling from all over Poland, and there was one attendee from the Czech Republic. A number of institutions were represented, academic and industrial; in the former category the University of Technology AGH in Kraków, the Institute of Agriculture in Wrocław, the Adam Mickiewicz University in Poznań, Warsaw University, the Technical University of Gdańsk, and Wrocław University of Technology, while the latter included Proxima S.A., Arcadias, Hydroconsult, Polgeol, Hydroeko, and Wro-Tech.

In 2003, three institutions in Wrocław, namely the University, the Institute of Agriculture and the University of Technology, created the Center for Hydrological Process Modeling, intended to be a forum for the discussion and exchange of experience of this modern and rapidly developing method. There was obviously a need for such a group, judging by how well attended the session was.

The two-day session focused on the advantages and limitations of numerical modeling. In the total of 24 presentations, many authors referred to the early period of using modeling techniques in Poland in the seventies and eighties of the 20<sup>th</sup> century. Important contributions to the development of this method were made by Professors A. Wiczysty, J. Flisowski, and T. Macioszczyk, and Dr. J. Szymanko. Many of the presentations dealt with the modeling of complex multi-layered aquifer systems, the calibration and uncertainties of filtration models, water resource evaluation in river valleys, and mining dewatering. Particular attention was paid to the selecting of input parameters in the models, such as recharge, to the manual “trial-and-error” method, and to automated parameter estimations.

During the session, a special seminar was dedicated to the memory of Professor Tatiana Bocheńska, the long-standing head of the Department of Hydrogeology in the Institute of Geological Sciences of Wrocław University. Her coworkers and former students gave talks on her significant scientific achievements and teaching activities, and accented her contribution to the development of the Wrocław school of hydrogeology. The great engagement in research work and teaching, and the outstanding personality of Professor Bocheńska were well commemorated.

On the second day of the Session, practical demonstrations were organized in the computer laboratory. They concentrated on model calibration problems and selected aspects of modeling with the Visual Modflow programme. Apart from the key issues of filtration modeling, some problems of contaminant migration were discussed. Considerable attention was drawn to the advantages and limitations of numerical modeling, and to the important role of field measurements and the structure of the objects studied.

Numerical modeling is a modern hydrogeological method which provides effective solution of complex groundwater flow and contaminant migration problems. As it is a relatively inexpensive method, it permits the simulation of different scenarios, especially in poorly described geological conditions. However, during a conceptual model design, an important issue is the identification of groundwater system’s parameters. In the calibration process, various techniques can be applied, from simple “trial- and error” method, to more sophisticated automatic calibrations.

The Wrocław meeting was an excellent opportunity for the exchange of experience with the method. Taking into account the new “catchment approach” to water management and the regulations of the Water Framework Directive of EU, regional models of multi-layered systems appear more and more important. There is no doubt that modeling is becoming the main tool for the implementation of rational water management. It was pointed out during the session that elaborate models should be “alive” and should have operational character. Several speakers suggested that the existing models should be verified and developed, and used as tools for prognosis the better assessment of water conditions. As in other countries, projects for groundwater basin models should be undertaken. The participants indicated the need for the joint consideration of the flow and quality of water in the models. Particular attention should also be paid to problems connected with recent changes and the closure of deep mining enterprises. The prediction of water conditions during mine closing, and the extent of subsequently watered terrines, the creation of water reservoirs and similar problems can be solved with modeling technique support.

The presentations given during the session were prepared for publication in a special post-session volume. The final conclusion on the session was that such workshops on groundwater modeling should be organized every second year.

*Stanisław Staško  
(Wrocław University)*

## The 8<sup>th</sup> "Dating Minerals and Rocks" Conference, Kraków, November 18–19, 2004

The 8<sup>th</sup> "Dating Minerals and Rocks" Conference was co-organized by three respected geoscience bodies. The Department of Geology, Geophysics and Environmental Protection of the AGH University of Science and Technology in Kraków, the Institute of Geological Sciences of the Jagiellonian University, and the Committee for Quaternary Research of the Polish Academy of Sciences came together to ensure that this would be another interesting and successful meeting.

The first day of the Conference was held in the AGH University buildings. The meeting was opened by Prof. Tadeusz Ratajczak of the Organizing Committee and Prof. Tadeusz Słomka, the Dean of the host Faculty. Prof. S. Hałas, in his short introduction, presented the history of the preceding seven "Dating Conferences". The first three talks of the morning session dealt with recent research. The first talk was on TL and OSL luminescence dating of loess in the south-east of Poland and the north-west of Ukraine, based on the work of S. Fedorowicz and co-workers. The second covered the cryogenic separation method in radiometric dating and stratigraphy, based on the studies of A. Wójtowicz and co-workers, and the third dealt with isotopic studies on the palaeoenvironmental conditions of Miocene oyster reefs, as performed by M. Krobicki and co-workers. Two further talks were devoted to new techniques and instrumentations offered by commercial companies, and were given by A. Wiśniewski and H. Hertle.

After the lunch break, there was a poster session covering a wide range of topics. The posters were on: fission track apatite dating of Carboniferous rocks (D. Bator *et al.*); Nd model ages for the Tatra granitoids (K. Jacher-Śliwczyńska *et al.*); K-Ar dating of diagenetic illite from Carboniferous sandstones in Mazovia (A. Kozłowska & P. Poprawa); the <sup>210</sup>Pb method in measuring sedimentation rates in lakes and rivers (E. Łokas & P. Wachniew); carbon isotope variation at the Lower/Middle Frasnian boundary (A. Piechota); and the U-Pb SHRIMP geochronology of

metageneous rocks of Łomża in the north-east of Poland (J. Wiszniewska *et al.*).

The afternoon session comprised five oral presentations. J. Domańska-Siuda presented the results of her team's Rb-Sr and Sm-Nd isotope studies in the Strzegom-Sobótka granitoids. The results of K-Ar dating of biotite from granitoids in the Kola Peninsula were given by M. Huber and co-workers, while E. Słaby's team's geochemical and isotopic studies of magma evolution in the Karkonosze Pluton were the subject of the third presentation. The palaeogeography of the West Inner Carpathians based on K-Ar mica ages (P. Poprawa *et al.*), and the dating of gneiss clasts from the Silesian Unit in the Carpathians (M. Michalik *et al.*) rounded out the first day, and then the assembled scientists retired for a social evening at the AGH.

The 2<sup>nd</sup> day of the Conference was held in the Institute of Geological Sciences of the Jagiellonian University. The first part of the morning session consisted of five talks dealing with the dating of volcanic rocks. The K-Ar ages of Tertiary basalts in Lower Silesia (K. Birkenmajer *et al.*) opened the day, while the second talk was on the petrology and age of basalts in the Sudetic Marginal Fault zone (J. Badura *et al.*). A. Ladenberger gave the third talk on Hf isotopes in modern geochemistry, exemplified by studies of Tertiary basalts in Lower Silesia. A lecture on the petrology and age of basalts in N. Vietnam was given, based on the work of E. Koszowska and co-workers, and radiometric dating of the Badenian pyroclastics from Bochnia and Wieliczka was the subject of the last talk, based on the studies of K. Dudek and co-workers.

After a coffee break arranged in the neighbouring Geological Museum, the final part of the Conference took place, comprising four talks on various aspects of the dating of minerals and rocks. R. Kryza spoke on the controversial geochronology for the gneisses and migmatites of the Góry Sowie, and the work of M. Manecki *et al.* was the subject of the talk on the preliminary EMPA monazite geochronology from the Sudetes. Sources of galena mineralization in the Kraków-Silesia region based on Pb isotope studies (K. Jacher-Śliwczyńska & J. Schneider), and the K-Ar dating of micas from the Tatra granitoids (K. Jacher-Śliwczyńska *et al.*) were the concluding talks in the presentation section.

The final discussion, chaired by Prof. Marek Michalik, the President of the Mineralogical Society of Poland and of the Organizing Committee, confirmed the scientific importance of the meeting. The Conference was attended by around 50 participants from several universities and research institutions in Poland. The organization and arrangements were very good, perhaps mainly thanks to the great involvement of many young scientists in the Organizing Committee. Extended abstracts for all the presentations were published in an Abstract Volume edited by M. Michalik *et al.*

Ryszard Kryza  
(Wrocław University)



"Dating Minerals and Rocks", Kraków 2004: opening session  
(Photo W. Obcowski)