

**INTERNATIONAL COMMISSION ON THE HISTORY
OF GEOLOGICAL SCIENCES**



NEWSLETTER 20

**BUDAPEST (Hungary)
1987**

**INTERNATIONAL UNION OF GEOLOGICAL SCIENCES
INTERNATIONAL UNION OF THE HISTORY AND
PHILOSOPHY OF SCIENCES**

**INTERNATIONAL COMMISSION ON THE HISTORY OF
GEOLOGICAL SCIENCES
(INHIGEO)**

NEWSLETTER N° 20

**BUDAPEST (HUNGARY)
1987**

Bureau of INHIGEO

President: Prof. G. Y. CRAIG, UK
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Prof. T. G. VALLANCE, Australia
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Készült a M. Áll. Földtani Intézet nyomdájában
Munkaszám: 183/86.
Felelős vezető: MÜNNICH Dénes

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EDITORIAL PREFACE

It is a great pleasure for us to launch the jubiliary, 20th issue of the INHIGEO Newsletter, and we are very pleased by its appreciation that is proved by the ever increasing demand for both the earlier and more recent numbers. In order to improve the standard of our NEWSLETTER, and to keep pace with the events, all full and corresponding members of INHIGEO are kindly requested to keep the following considerations in mind:

- 1 Country reports should be submitted *annually* by the country's representative and should cover all the relevant activities and events.

When compiling these reports, the following scheme should be followed:

- scientific meetings
- other events
- personalia (obituaries, commemorations, biographies, etc)
- publications (books, monographs, articles and studies)
- miscellaneous information, change of address, etc.

- 2 Reports on individual activity are welcome. They are liable to add valuable information to the country reports.

- 3 Book reviews, beside indicating the fact of publication, should be also informative concerning the contents and availability.

In the first part of 1986 contacts were renewed and established, respectively, with IUHPS, ICOHTEC, and the International Commission (Working Group) of the History of Geographical Thought. (The respective addresses are given on p. 52).

Prof. SHEA (Secretary General of IUHPS), Prof. BUCHANAN (Secretary General of ICOHTEC) and Prof. FREEMAN (Secretary General of ICHGT) have all reacted favourably concerning a closer co-operation and regular exchange of information, and this is greatly appreciated.

An unexpected problem is caused by the fact that the undersigned has left his present job as Deputy-Director of the Hungarian Geological Institute to become the Secretary of the International Geological Correlation Programme (IGCP) from the end of September 1986, working at the UNESCO headquarters, in Paris, France.

I can, however, gladly announce that Mr. A. M. M'BOW, Director General of UNESCO has kindly permitted me to retain my position as Secretary

General of IHNIGEO. Accordingly, all the correspondence should be sent to my new address given on p. 51.

I shall do my best to foster the activities of INHIGEO during the forthcoming years, preparing the renewal of the Bureau during the 28th Session of the International Geological Congress in Washington, D. C., July 1989, on the occasion of the 25th anniversary of INHIGEO's conception (New Delhi, 1964).

September 1986.

E. DUDICH

CONGRATULATIONS

*On the occasion of his 70th birthday the following letter
was sent to V. V. TIKHOMIROV, Vice President of INHIGEO
(14 October 1985)*

Highly estimated Professor TIKHOMIROV,
Dear *Vladimir Vladimirovich*,

On behalf of the Board and all the members of INHIGEO we have the honour to forward to you our best wishes on the occasion of your 70th birthday.

We are fully aware of, and greatly appreciate, your personal merits in the foundation of INHIGEO and this fact must be emphasized. Acting as the first President of INHIGEO, you indefatigably performed a very varied and successful job. Basically, your work led to the achievement that the INHIGEO, within IUGS, was transformed from a Committee into Commission.

Also we are obliged to express our thanks to you for the excellent organization of the 11th INHIGEO Symposium, held during the 27th Session of IGC in August 1984. It was also a great pleasure for us to see you again at the 12th Symposium in Edinburgh, in 1985.

As one of the Vice Presidents of INHIGEO, you are kindly asked to keep on supporting the work of our organization by your active participation, and the Board by your valuable ideas.

We sincerely hope that we can welcome you at the forthcoming 13th INHIGEO Symposium. According to our plans and the preliminary consultations it will be held in Pisa, Italy in September 1987. The Symposium will concentrate on problems of the history of development of palaeontology and stratigraphy.

We wish you good health and energy for your prominent work in the field of the history of evolution of the geological sciences.

Very respectfully yours

Prof. G. Y. CRAIG
President of INHIGEO

Dr. E. DUDICH
Secretary General of INHIGEO

Congratulations to C. J. SCHNEER

At the 98th Annual Meeting of the Geological Society of America (Orlando, Fla, October 1985), the History of Geology Division presented its "History of Geology Award", a pewter bowl and certificate, "for contributions of fundamental importance to our understanding of the geological sciences" to C. J. SCHNEER, former Vice President of INHIGEO. Dr. U. B. MARVIN, Full Member of INHIGEO for the USA made the presentation.

Prof. C. J. SCHNEER initiated the first New Hampshire Interdisciplinary Conference on the History of Geology, held in 1967, and it was followed by an equally successful second one on the occasion of the 200th anniversary of the birth of the USA. He edited also the volumes containing the proceedings of the two conferences: "Toward a history of geology" (1969), and "Two hundred years of geology in America" (1979), respectively.

C. J. SCHNEER served as President of the US Committee for the History of Geology (USHIGEO), as Vice President of INHIGEO, as Chairman of the History of Geology Division of the GSA (1978-79), and President of HESS (History of Earth Sciences Society).

On behalf of INHIGEO let me warmly congratulate him on this joyful occasion.

E. DUDICH

On the occasion of his 80th birthday the following letter was sent to Prof. R. HOOYKAAS, Past President of INHIGEO (1 August 1986)

Dear Professor Hooykaas,

I have the pleasant duty and the honour to forward you the warmest congratulations and very best wishes of INHIGEO's Board on the joyful occasion of your 80th birthday.

Your exceptional personality, high erudition and profound humanism combined with imposing self-discipline exerted a longlasting effect on the development of INHIGEO during your 8-year presidency.

We are glad to have you with us, to profit of your vast experience, bright ideas and wise suggestions, which are indispensable for INHIGEO's further smooth evolution in the same spirit.

Very respectfully yours

E. DUDICH
Secretary General

COMMEMORATIONS

YU. A. ANISIMOV (1918—1985)

On 16th June 1985, Yu. A. ANISIMOV, Doctor of Historical Sciences, Corresponding Member of INHIGEO since 1982, died.

Yu. A. ANISIMOV was born on 28th December 1918. During the Great Patriotic War (1941—45) he served as an officer of artillery and was twice wounded.

In 1948 ANISIMOV graduated at the Mining College in Leningrad, and since that time he worked in Kiev, studying the history of mining and mineral exploration. He was also greatly interested in the general problems of advance in science and technology and its impact on the economic progress of society.

ANISIMOV has published more than 100 scientific papers on the history of science and technology. For twenty years he headed the Department of the History of Technology at the Historical Institute of the Ukrainian Academy of Sciences.

In 1973 he was elected member of the International Union of the Historians of Technology in Paris.

V. V. TIKHOMIROV

L. BOGSCH (1906—1986)

Professor L. BOGSCH, the President of the Historical Section of the Hungarian Geological Society, died in Budapest on 19th February, 1986.

Born in Vajdahunyad (28th September 1906), he studied natural history and chemistry at the Peter Pázmány University (in Budapest), obtained his Ph. D. degree in 1929 and became Assistant Professor of Geology at the same University. Between 1933 and 1937 he continued postgraduate studies in Vienna and Berlin.

In 1946 L. BOGSCH was transferred to the re-established Department of Palaeontology as Associate Professor, and was appointed full professor in 1958 holding the chair till his retirement in 1976. First he dealt with

Vertebrate palaeontology and the stratigraphy of the Oligocene then he became a widely known and acknowledged specialist of Miocene malacology and stratigraphy. As a devoted teacher he wrote the first university textbook on general palaeontology in Hungarian language.

As the President of the Palaeontological and Stratigraphical Section, and later, until his death, the President of the Historical Section, L. BOGSCH acquired great merits also in the Hungarian Geological Society. On the occasion of the Xth INHIGEO Symposium (Budapest, 1982) coinciding with the centenary of the foundation of the Palaeontological Department of the Lorand Eötvös University he summarized its history in an impressive way.

As the President of the Hungarian Society for Speleology and Karst Research, member of several Hungarian and international commissions and scientific societies, he lectured also at several universities and scientific meetings abroad, from Greece in the south to Denmark in the north. He was elected honorary member of the Hungarian Geological Society in 1978.

A charming personality of high erudition combined with warm humanity and a brilliant sense of humour, L. BOGSCH will be preserved in the memory of those who knew, appreciated and liked him.

T. KECSKEMÉTI

*A. S. POVARENYYKH
(1915–1986)*

On 3rd May 1986, A. S. POVARENYYKH, prominent mineralogist and crystal chemist, full member of the Ukrainian Academy of Sciences died in Kiev. He had paid great attention to the history and methodology of mineralogy.

A. S. POVARENYYKH was born on 3rd February, 1915. Having graduated at the Central Asian Institute of Industry in 1940, he served during World War II as an engineer-officer.

In 1957 he obtained Doctor's degree in Crystal Chemistry and was appointed head of department at the Institute of Geological Sciences in Kiev. POVARENYYKH, very interested in the history of sciences, initiated a series of papers on the methodology of geological sciences which became widely known and highly appreciated.

He published about 400 papers, not only in the USSR, but also in the USA, Canada, France, Denmark and other countries.

For many years he actively studied the history of geological knowledge and headed a team dealing with the evolution of the concept of time in geology.

He was elected Corresponding Member of INHIGEO in 1972.

V. V. TIKHOMIROV

L. SOLÉ Y SABARIS
(1908–1985)

L. SOLÉ Y SABARIS was born in Gavá (Barcelona) on the 18th May 1908, and grown up in Lerida, where his father was a teacher.

He studied science at the University of Barcelona (1925–29). In 1932 he was appointed to the chair of Natural History of the Figueras Institute. In 1940 he moved to the Department of Physical Geography, Mineralogy and Geology of the University in Granada, where he started his career as a university reader and expert of the Betic Ranges. In 1943, he was appointed to the chair of Physical Geography and Applied Geology of the University in Barcelona. He kept on working there till his retirement in 1978, his favourite topic being the investigation of the "Catalanides".

He was Director of the Institute of Pyreneic Studies, the Barcelona Institute of Geology, the National Geological Institute, and the Jaime Almera Institute, full member and president of the Barcelona Academy of Sciences and Arts, member of the National Commission of Geology, Vice Rector of the University of Barcelona.

Prof. SOLÉ Y SABARIS worked in various fields of the Earth Sciences, such as physical geography of the Tertiary and Quaternary. He, as director, participated in the preparation of 30 doctors' theses.

During his last ten years he studied, with great enthusiasm, the history of Catalanian geology, and for this reason he was elected Corresponding Member of INHIGEO.

He died in Barcelona in 1985.

J. M. LOPEZ de AZCONA

E. SZÁDECZKY-KARDOSS
(1903–1984)

With the sudden death of Prof. E. SZÁDECZKY-KARDOSS (Budapest, 23rd August 1984) a renaissance-style scientist of exceptional grandeur disappeared from the stage of international science. Born at Kolozsvár on 10th September 1903, as the son of GY. SZÁDECZKY-KARDOSS, university professor of geology, he graduated in natural history and chemistry at the Peter Pázmány University (in Budapest) in 1926. He started to work as Assistant Professor of Mineralogy and Geology at the Faculty of Mining, Metallurgy and Forestry of the Technical University in Sopron (W Hungary) and became full professor in 1936. When the University was moved from Sopron to Miskolc (E Hungary), he became its Rector for the academic year 1949/50.

In 1951 E. SZÁDECZKY-KARDOSS was invited to the chair of Mineralogy and Petrography of the Budapest University, later transformed to a Department of Petrography and Geochemistry and he headed it until his retirement in 1974. He was also the director of the Laboratory for Geochemical Research of the Hungarian Academy of Sciences founded by him in 1955.

The scientific research work, carried out by E. SZÁDECZKY-KARDOSS was of astounding variety and originality. Starting with optical crystallography, regional geology and palaeoclimatological implications of salt deposition he elaborated new, quantitative methods for the investigation of gravels, introduced up-to-date coal petrography in Hungary, wrote the first treatise on geochemistry in Hungarian (1955) and developed new concepts on the interaction of the mantle, the crust, the hydrosphere and the atmosphere (1968). His ideas of the Earth's global dynamism were summarized in his "Geonomy" in 1974. This served as basis for the elaboration of E. SZÁDECZKY-KARDOSS' "universal law of cyclicities" that is to provide a common, relatively simple quantifiable basis for the understanding of the different forms of motion. In this highly creative activity all aspects of his unprobably wide scale of interest and multilateral erudition ranging from all branches of science through sociology and literature to linguistics and music have been successfully combined to produce an integrated picture of the Universe.

This approach based on the two fundamental parameters of space and time requires large-scale interdisciplinary co-operation. This is, in fact, still

going on within the sphere of the Geonomical Commission founded by him in 1976. Unfortunately, he died too early to see the publication of the English-language volume containing his concepts and the further development of his ideas in this field (the volume is in press now).

E. SZÁDECZKY-KARDOSS organized (1965) and headed (till 1976) the Department of Earth Sciences and Mining of the Hungarian Academy of Sciences and edited its journal, the *Acta Geologica Acad. Sci. Hung.* He initiated and directed several research projects and for several years he was a Member also of the Hungarian Parliament. His work was honoured by a number of awards including the highest award for scientific and cultural achievements, the "Kossuth Prize" (twice) and the "Leopold von Buch Medal".

He was a member and/or official of the Hungarian Academy of Sciences, and of the World Academy of Art and Science, Corresponding Member of the Austrian Academy of Sciences, honorary member of the Hungarian, Czechoslovakian and Finnish Geological Societies.

Having always been interested rather in the future of science than in its past he always studied with much care and sense of criticism the published materials in order to avoid committing errors and to find the optimum path forwards.

By now, to our greatest grief, he himself become a subject of historical studies to be written by his disciples.

E. DUDICH

COUNTRY REPORTS

Argentina

T. G. CASTELLANOS proposed to the Board of the National Academy of Sciences to organize a series of lectures on the "History of geological exploration in different regions of Argentina".

The first lecture was delivered by Dr. A. C. RICCARDI on "The history of geological exploration of the South Patagonian Range in Argentina" and will be published in the "Série Miscelánea" of the Academy in 1986.

T. G. CASTELLANOS presented a paper on the "Geology and geography of Córdoba (Argentina) in the early period". It will be also published in the above mentioned "Série Miscelánea" of the National Academy of Sciences of Córdoba in honour of the 500th anniversary of the discovery of America, in 1992.

T. G. CASTELLANOS

Austria (1981–1985)

1 *Austrian Geological Society*

Publications

Mitteilungen der Österreichischen Geologischen Gesellschaft (the following volumes):

Bd. 74/75 (1981/82) devoted to Eduard SUESS on the occasion of the 150th anniversary of his birth (5 papers by T. E. SUESS, O. KÜHN, H. ZAPFE, A. TOLLMANN, J. DONNER).

Bd. 76 (1983) devoted to the 75th anniversary of the foundation of the Austrian Geological Society (3 papers by W. GRÄF, E. BRAUMÜLLER, A. TOLLMANN).

Bd. 77 (1984) contains a paper by L. REICH (Budapest) on the influence of E. SUESS' ideas in the Austro–Hungarian monarchy.

Bd. 78 (1985) Heft 1 is devoted to the life and work of W. E. PETRASCHECK.

These volumes also include obituaries and book reviews. In 1983 the Austrian Geological Society founded an OTTO AMPFERER AWARD to honour the outstanding achievements of young geologists.

2 *Geological Department of the Vienna University*

The Archives acquired several various documents about and by Alpine geologists.

Prof. A. TOLLMANN held a course, for the first time in academic year 1985/86 (two lessons/week) on the History of Geology. It discusses the topic from the Stone Age to present. Related scientific fields are also touched upon. Within the curriculum special emphasis is laid on the history of the geological exploration of Austria.

Also, Prof. A. TOLLMANN published the history of geological investigations in Austria (Eastern Alps) in separate chapters of the following monographic works (all publ. Verlg. Deuticke, Vienna):

Monographie der Nördlichen Kalkalpen I—III, 1973—1976.

Geologie von Österreich I—III, 1977—1986.

3 *Geological Survey of Austria (GBA)*

T. CERNAJSEK has continued developing and summarized the history of geological mapping in Austria.

On 15th November 1985 the 150th anniversary of the foundation of the Mining Museum and the 135th anniversary of the foundation of the Geological Survey were celebrated together. Four lectures (by T. GATTINGER, G. HAMANN, W. E. PETRASCHECK, A. WEISS) offered an overall review of the past, present and prospects of the Survey.

Dr. H. LOBITZER published two papers on "Austrian contribution to the geological exploration in Africa" (Mitt. Österr. Ges. Geschichte der Naturwiss. Bd. 1—2. Wien, 1981—1982).

4 *Austrian Academy of Sciences*

Prof. G. HAMANN edited two geohistorical issues of the series published by the Commission on the History of Mathematics, Science and Medicine:

— Heft 41 (1983) In memoriam E. SUESS (100 p., 12 illustrations), including papers by G. HAMANN, W. E. PETRASCHECK, A. TOLLMANN, B. HAMANN.

– Heft 43 (1985) Franz von Hauer: Voyage reports 1848 (87 p., 1 illustration). Ed. by together with W. E. PETRASCHECK.

5 *Society of the Austrian Students of Geology and Mining*

In the Society's publication series three volumes were devoted to renowned geologists with complete biobibliographies:

Bd. 28 (1982) to Prof. B. PLÖCHINGER (65th birthday), by R. LEIN,
Bd. 29 (1983) to Prof. E. SCHROLL (60th birthday) by J. CERNY, and
Bd. 30/31 (1984) to Prof. H. MOSTLER (50th birthday) by R. BRANDNER.

6 *Geological–Palaeontological Department of the Graz University*

Prof. H. FLÜGEL has been active in the field of the history of geology for many years. Among others, he summed up the history of palaeontology and geology at the Graz University, and published several papers on WEGENER, AMPFERER and SCHWINNER as contributors to the first chapter of new global tectonics (the last paper being published in 1984 in *Earth Sci. Hist.* Vol. 3/2, pp. 178–186, 9 illustrations).

7 *Contributions from other countries to the history of geology in Austria*

E. T. TOZER published "The Trias and its Ammonoids: the evolution of a time scale" in *Misc. Rept. Geol. Surv. Canada*, 35. Ottawa, 1984. It is a thorough review of the history of Triassic studies from HAUER and SUESS through MOJSISOVICS, BITTNER, BÖCKH und GRIESBACH up to the present.

A. TOLLMANN

Brasil

1 *Training course*

An introduction to the theory and history of geology,

Date: 7–11 October 1985,

Lecturers: Prof. C. PASCHOALE (coord.), Prof. H. G. FERNANDES,
and Prof. S. F. de MENDONÇA FIGUEIRÔA.

2 Publications

A. L. MARINS 1984: "A brief history of Brazilian gold mines" in G. A. ROCHA (ed.): "Gold mines and seekers in Brazil". — Rio de Janeiro, (distributed in 1985).

L. H. NUNES, S. F. de MENDONÇA FIGUEIRÔA 1985: "An environmentalistic view from the beginning of this century". V. Simposio Regional de Geologia (Atas). Sociedade Bras. Geologia NSP. Novembro 1985.

M. C. OLIVEIRA, S. F. de MENDONÇA FIGUEIRÔA 1985: "Floods in Sao Paulo: a problem since last century". Some remarks about engineer Bianchi Betoldi's report from 1887. (Rev. IG, Sao Paulo, 5 (1/2), Jan.—Dez. 1984).

S. F. de MENDONÇA FIGUEIRÔA

France

In 1985, COFRHIGEO (the French Commission on the History of Geology) held its General Assembly and two scientific sessions at which 10 papers were presented. Most of these lectures will be published in the 3rd volume of COFRHIGEO proceedings (the first issue of 87 pages was distributed in December 1985). The topics cover an extremely varied range of fields such as coal geology, the geological ideas of ancient Greeks and Romans, geospeleology, Cuvier's catastrophism, the interrelations of geology and archeo-metallurgy, comparative sociological examination of the Geological Societies of London and France in 1835, and the vulgarization of geology in France around the end of the past century.

A commemoration was devoted to Eugène WEGMANN whose generosity had enabled the Geological Society of France to honour the achievements of one historian of geology in every fourth year.

1985 was a particularly successful year for COFRHIGEO. Thanks to the enthusiasm of its President, Prof. F. ELLENBERGER, 22 new candidates joined the organization, thus increasing the number of members to 130 including 15 foreigners. Prof. F. ELLENBERGER represented the Commission at the 12th INHIGEO Symposium in Edinburgh (April 1985) and at a special meeting of the Geological Society of France (September 1985). The topic of this latter meeting was the 100th Anniversary of the discovery of overthrusts (nappes de charriage) in Provence by M. BERTRAND.

In spite of the fact that he had stopped being a member of COFRHIGEO a couple of years ago, we announce with deep regret the death of Franck BOURDIER (1910–1985) who acquired great merits in keeping alive the interest in the history of geology in France in the period 1945–1975.

J. GAUDANT

German Democratic Republic

1 *Working Group on the History and Philosophy of Geological Sciences (Geological Society of the GDR)*

The Group, headed by Dr. E. FABIAN (University of Greifswald, 2200 Greifswald, Domstr. 22), and counting about 100 members, held three meetings in 1985:

- Berlin, 6th March 1985
- Karl-Marx-Stadt, 21st May 1985
- Berlin, 17th December 1985.

In the course of these meetings the following main topics were discussed:

- results and impacts of the meetings organized and co-sponsored by the Working Group;
- preparation of the forthcoming meetings;
- information on the current activities of INHIGEO, including reports on the 11th (Moscow, 1984) and 12th (Edinburgh, 1985) Symposia;
- preparation of the 4th joint USSR–GDR Symposium on the history of geological sciences (Baku, 1986);
- presentation and discussion of the draft of the projects proposed by M. GUNTAU: "Knowledge of the Earth through history: Main trends of the development of geological thought" and by E. FABIAN: N. Steno's "De solido intra solidum...", Florentiae, 1669 (facsimile edition);
- review of recent publications.

2 *Scientific meetings*

a) "*The geological sciences in Germany in the period of the industrial revolution (1830–1870)*", Karl-Marx-Stadt, 21–23 May 1985. It was organized by the Working Group (see Chap. 1) and the Freiberg Mining Academy. Thirty papers were presented, mainly on the impact of technological changes on the evolution of geological theories and approaches. (Selected papers will be

published in "Zeitschrift für Geologische Wissenschaften".) The meeting was closed by a field trip and its guide described the history of hard coal mining in the Luga-Oelsnitz and Zwickau districts.

M. GUNTAU

b) "*In honour of Hans CLOOS*", Magdeburg, 25–26 October 1985. The meeting, on the occasion of the 100th anniversary of H. CLOOS' birth, was organized by the Working Group and the Präsidium of the Society for Nature and Environment of the Cultural Association of the GDR.

At the meeting Prof. G. MÖBIUS (Greifswald) presented an overlook on CLOOS' life and work, and several papers dealt with the actuality of his "granite tectonics". The meeting with about 60 participants, was closed by a field trip to the Ramberg–Pluton at the northern margin of the Harz Mts.

E. FABIAN

c) "*Geological Objects of Nature Conservation*", Bautzen, 7–9 November 1985. At the meeting, organized by the Geological Society both theoretical and practical aspects of the problem were discussed, and case histories were presented. The conclusion was that these objects also have their own histories and they should be dealt with to a much greater extent when discussing problems of the history of geology.

O. WAGENBRETH

d) "*Ernst Fulda Colloquium*", Weimar, 21st November 1985. On the occasion of the centenary of E. FULDA's birth (1885–1960) the meeting was organized by the Potassium Working Group of the Geological Society. With A. SCHWANDT as chairman, nine speakers presented the different aspects of E. FULDA's life and work, devoted to the potassium-bearing Zechstein Formation that is of prominent importance for the GDR's industrial life. The ca. 50 participants received the abstracts of the papers and a list containing E. FULDA's works, both published and unpublished. After the session E. FULDA's tomb was wreathed in Weimar.

P. KÜHN

3 Events planned for 1986

a) Symposium on the "*History of mining and geological exploration in the Lausitz region*" in Bad Muskau and Weisswasser, 21–23 March 1986.

b) The 4th bilateral GDR—USSR Symposium on the History of Geological Sciences (Oil Geology), Baku, 20—25 October 1986, on the invitation by the Azerbaïdzhan Academy of Sciences.

c) Conference on the "Past and Present of Borehole Logging", Magdeburg, 13th November 1986.

4 Publications

E. FABIAN—M. GUNTAU—M. STÖRR (eds.): Philosophie und Geologie. (Schriftenreihe für Geologische Wissenschaften Heft 24). Berlin, 1985. Akademie Verl. 176 p., 11 illustrations, 2 tables. The volume contains the contributions to the third GDR—USSR Symposium on the History of Geological Sciences ("Evolution history of the philosophical—methodological concepts in the Earth Sciences", Greifswald, 25—27 October 1983.)

G. AGRICOLA: Vom Bergwerck, XII Bücher. Ed. by H. PRESCHER. Facsimile ed. 520 p. with many illustrations. Commentaries. 164 p., 97 illustrations. — Leipzig, 1985. Deutscher Verl. für Grundstoffindustrie.

Facsimile edition with commentaries of the first German translation (1557) of G. AGRICOLA'S "De re metallica, Libri XII" published by Frobenius in Basel, 1556.

H. PRESCHER (ed.): Leben und Wirken deutscher Geologen im 18. und 19. Jahrhundert. — Leipzig, 1985. VEB Deutscher Verl. für Grundstoffindustrie. 308 p., 108 illustrations, 14 tables.

Papers on PALLAS, KARSTEN, SCHREIBER, von HOFF, GLENCK, MAHR, GÖSSEL, BREITHAUPT, von COTTA, JENZSCH, BEYRICH, HAUCHECORNE und LIEBE are included in the volume.

In the series "Biographien hervorragender Naturwissenschaftler, Techniker und Mediziner" (Biographies of prominent naturalists, technicians and physicians; B. G. Teubner Verlagsgesellschaft, Leipzig) the following volumes deal with earth scientists:

Bd. 46 KÖRBER: A. Wegener

Bd. 48 ZIRNSTEIN: Ch. Lyell

Bd. 55 KRÜGER: W. I. Wernadsky

Bd. 61 ENGEWALD: G. Agricola

Bd. 75 GUNTAU: A. G. Werner

M. GUNTAU

Hungary

- 1 The *Historical Section* of the *Hungarian Geological Society* held the 5th Geohistorical Day on 18th March 1985. At the meeting problems of "Mineral exploration in Hungary between 1945 and 1975" were discussed. Eight papers were presented on
- Ores and non-metallic raw materials (J. CSEH-NÉMETH and T. ZELENKA)
 - Oil and gas (G. CSÍKY and L. KŐRÖSSY)
 - Lignite (S. JASKÓ)
 - Methods of oil and gas exploration (G. SZUROVY)
 - Subsurface waters (I. DOBOS)
 - Bauxite (B. VIZY)
 - Building stones (P. KERTÉSZ)
 - Raw materials for ceramic and binding industry (GY. VITÁLIS).

- 2 *Six regular meetings* were held where the following papers were presented:

April

L. REICH: The significance of L. LÓCZY sr.'s expeditions to Central Asia.

L. KŐRÖSSY: Hungarian explorers following L. LÓCZY sr.'s route in Asia.

E. LISZTES: History of the instruction of geology in Hungarian secondary schools from Queen Maria Theresa till 1848/49.

May

G. CSÍKY: 15 years of the Historical Section of the Hungarian Geological Society.

E. DUDICH: The impact of Central European Institutions on the development of geology (Lecture delivered at the 12th Symposium of INHIGEO in Edinburgh, April 1985).

V. SZÉKY-FUX: Commemoration on GY. SZÁDECZKY-KARDOSS on the 125th anniversary of his birth.

September

M. GUNTAU: (GDR, past Secretary General of INHIGEO): Controversial theories in the history of geological sciences (Followed by a vivid round-table discussion on the university level instruction of the history and philosophy of science).

October

- L. FEJÉR: Bibliographical sketch of the history of geology in Hungary.
T. ZENTAY: The agrogeologist Peter TREITZ died 50 years ago.

November

- G. CSÍKY: Mátyás BÉL and his age (the early 18th century).
On this occasion G. CSÍKY was elected new President of the Section to be assisted by G. BIDLÓ as secretary.

December

- G. CSÍKY: Report on 1985.
T. KECSKEMÉTI: The past, present situation and tasks of earth science collections in Hungary.

3 Publications

- G. AGRICOLA: Tizenkét könyv a bányászatról és kohászatról (De re metallica, Libri XII). (Hungarian translation of "De re metallica". Basel, 1556. Frobenius. With a study and indices compiled by L. MOLNÁR). — Publ. by Országos Magyar Bányászati és Kohászati Egyesület, Budapest. 1985. 658 p.
- F. BENKŐ: Magyar mineralógia az az a kövek s értzek tudománya. (Hungarian mineralogy that is the science of stones and ores.) Facsimile ed. Budapest, 1985. (With Appendix by T. WEISZBURG, ZS. VITA and J. HAJDÚ-MOHAROS.) The original was published in Kolozsvár, 1786.
- J. HÁLA (ed.) 1985: Neogene mineral resources in the Carpathian Basin. Historical studies on their utilization. — Budapest. Hungarian Geological Institute. 656 p.
- P. TÓTH (ed.) 1985: History of understanding the Neogene in Hungary. — Budapest, Hungarian Geological Institute, 114 p.

4 Commemorative papers by G. CSÍKY (in Hungarian)

- Pioneers of oil and gas exploration in Hungary (V. ZSIGMONDY, J. BÖCKH, F. BÖHM, H. BÖCKH, S. PAPP, F. PÁVAI-VAJNA). — In 19th Itinerary Congress of the Oil, Gas and Water Section of the Hungarian Mining and Metallurgical Society, Hajdúszoboszló, 1985. pp. 59–65.

- Centenary of S. PAPP and F. PÁVAI-VAJNA. — In "Anniversaries in science and technology, 1986". Budapest, 1985. MTESz. pp. 88–91.
- Centenary of J. BÁNYAI. — Ibidem, pp. 61–63.

G. CSÍKY

Mozambique

Geological investigations in Mozambique have a history of more than 100 years. Before 1975 when Mozambique became independent, these investigations were carried out by the Portuguese colonial authorities and by foreign geologists who either worked in the country or analyzed samples coming from Mozambique in their own country, and also by foreign companies and institutions.

Speaking of the history of geology in Mozambique we can distinguish on one hand the history of companies, state institutions and foreign firms who, for different purposes, carried out geological research, e.g. the *Serviços de Geologia e Minas* founded by the Portuguese Colonial Government in 1928, and the individual scientists on the other, whose work, in some cases, contributed not only to the geological knowledge of the country but also to that of the African continent in general. Among these latter we can mention KRENKEL who published a comprehensive work on the geology of the African continent (1925) and A. HOLMES, one of the greatest geologists of the country who has great merits in elaborating the absolute dating scale, and who published several still valid studies on the geology of Mozambique, among others on his concept on the "Mozambique Belt" or "Mozambiquiano".

Studying the history of geology in Mozambique started with the publishing of the work "*Subsídios para a história da Geologia em Moçambique*" by A. FIGUEIREDO NUNES in 1958. Now a new generation of Mozambican geologists with new national consciousness started a new stage of the investigation of the problems of geology. The activities include compiling new bibliographies and studying the existing ones, editing news boards and radio programmes, lecturing and publishing studies. In May 1986, in the course of the "2ª Jornadas das Engenharias e Ciências" some problems of the geology were also discussed.

In Mozambique, research has been carried out for a long time on the volcanic formations of the Lebombos (1875, 1909, 1920), on the structure of the vast Precambrian territory (1881, 1886, 1918), on the stratigraphy of the Cretaceous and Tertiary formations (1868, 1903, 1910, 1912) and on the genesis and mineralogical—geological setting of some mineral deposits e.g. the coal of Tete Karroo formation—Moatize 1844, 1883, 1912).

Nowadays experts from countries that are scientifically advanced study the soil and subsoil of Mozambique and it is well reflected in their articles and studies. We have to combine our national traditions with the valuable scientific inheritance.

J. R. V. MANUEL

Poland

In 1985, scientific research work on the history of geological sciences were mainly carried out and events were mainly organized at the Museum of Earth, at other Institutes of the Polish Academy of Sciences, and at higher educational institutions. (Academy of Mining and Metallurgy and Jagellonian University in Cracow, Silesian University, etc). Scientific societies were also active in this field (Society of Old Polish Mining, Metallurgy and Industry in Kielce, Polish Geological Society, Polish Mineralogical Society, etc).

Similarly to the previous years, work at the Museum of Earth mainly consisted of collecting the archival material (also in Czechoslovakia and the USSR) for the monographic study on the history of geology at the University of Wilno in the 18th and first half of the 19th century (J. GARBOWSKA). Material was also collected concerning the Polish contribution to the geological investigation of Asia in the 19th and early 20th century (Z. WÓJCIK). The history of geological investigations in the Upper Silesian Coal Basin was studied at the Silesian University (J. RZYMELKA).

The Society at Kielce, organized several scientific sessions devoted to the achievements of the outstanding geologist J. SAMSONOWICZ (lecturers: S. CZARNIECKI, H. TOMCZYK and Z. WÓJCIK), to the history of surveying of iron and copper ore deposits in the region, and to the development of engineering geology (lecturers: Z. RUBINOWSKI, J. URBAN and Z. WÓJCIK). Besides, special meetings devoted to the memory of outstanding Earth

scientists E. PASSENDORFER, J. LILPOP and W. SZAFER, and also a meeting discussing the role of Poles in the geological investigation of the Baykal lake area in the 19th century were organized by the Polish Geological Society.

Devoted to the memory of Stanislaw STASZICZ exhibitions were organized in the local Museums of Lublin and Sieradz by S. CZARNIECKI showing materials from his own collection. The Museum at Lublin published an interesting exhibition guide introducing the scientific achievements of this outstanding representative of the epoque of Enlightenment.

Several important studies were published on different problems of the history of geology in Poland. The following should be mentioned:

- A fragment of L. ZEJSZNER's manuscript about his first excursion to the Tatra Mts in 1829 (ed. by S. CZARNIECKI and Z. MARTINI).
- Some remarks on geology and mineralogy in Poland in the 17th century (Z. WÓJCIK).
- The geology in Poland in the period 1918–1939 (J. SKOCZYLAS).
- An outline of the history of studies on amber in Poland since the 16th century (B. KOSMOWSKA-CERANOWICZ).
- 65 years of the Geological Institute (W. RYKA).
- Martyrdom of professors of the Mining and Metallurgical Academy of Cracow (A. BOLEWSKI and H. PIERZSCHALA, ed. by A. KLECZKOWSKI).
- 200 years of mineralogy at the Cracow University, Part 1. (A. GAWEL) (This problem was earlier presented by W. Narębski at the XIth INHIGEO Symposium "History of Mineralogy" during the 27th IGC in Moscow.)

Numerous obituaries, commemorations and biographies were published in different periodicals.

Here it should be emphasized that the financial difficulties of Poland evidently limit the participation possibilities of the Polish INHIGEO members in international events. This is also true for the planned conferences in Pisa and Washington. That is why we are going to send some Polish contribution collected in volumes (ed. by A. KLECZKOWSKI, publ. by the Academy of Mining and Metallurgy). The above problem was discussed in Cracow by a group of Polish INHIGEO members (J. BABICZ, S. CZARNIECKI, A. KLECZKOWSKI, W. NARĘBSKI, Z. WÓJCIK; A. GAWEL was absent due to serious disease) during the visit of the Secretary General of INHIGEO, E. DUDICH on 14th November 1985. A proposal for the organizing of a joint Polish–Czechoslovakian–Hungarian symposium on the history of the geo-

logical investigations in the Carpathians was also discussed, together with the difficulties caused by the recently introduced limitations of the import of scientific periodicals to Poland. It is hoped that E. DUDICH's initiatives will help with overcoming the above problems both in Poland and in other countries.

W. NARĘBSKI—Z. WÓJCIK

USA (1985)

That much good ensues, and that the science is greatly advanced, by the collision of various theories, cannot be doubted.

Henry Thomas De la Beche, 1830

So begins M. J. S. RUDWICK's commentary, *The great Devonian controversy*. Publication of the book was one of the noteworthy events of 1985 for those interested in the history of science. Geologists will appreciate RUDWICK's accounts of the arguments generated by the "gentlemanly specialists" of the first half of the 19th century as they tried to decode the stratigraphic record. Those with historical or philosophical interests will be gratified by the rich analysis of the social and intellectual currents that were at work in the evolution of scientific issues. RUDWICK's book, and several other contributions noted below, indicate that it was a productive year in earth-science history.

Two other publications that are likely to make 1985 a memorable year for those interested in the history of geology are a provocative essay in a rejuvenated journal and a collection of articles in an important new set of publications. The essay by M. GREENE (University of Puget Sound), in the new series of *Osiris*, is mandatory reading. GREENE casts a critically appraising eye over the landscape of the history of geology. Not everyone will concur with every point of the analysis, but as food for thought, as a guide to resources, and as an indicator of fruitful areas for future research, the article is of great value.

A resource too recent to be included in GREENE's essay is a collection of historically oriented articles edited by E. DRAKE (Oregon State University) and W. JORDAN (Millersville University). The book is the first to be published by the Geological Society of America in the series, *Decade of North*

American Geology, which celebrates the Society's centennial in 1988. It is fitting that historical issues should be at the forefront of a historical event.

Other noteworthy publications that appeared in the last year are TAYLOR's illustrated and informative paper, in the *Proceedings of the Geoscience Information Society*, on geoscience mapping from 1700 to 1830, *Wealth inexhaustible: a history of America's mineral industries to 1850* by Margaret & Robert HAZEN, and *The dark side of the Earth*, R. M. WOOD's analysis of the plate-tectonics revolution. The *Journal of geological education* continues to publish major articles on the history of geology. Topics for 1985 included Darwin's voyage on the *Beagle*, the Deluge as a geological agent, and the development of the facies concept.

Some professional meetings in the last year were devoted to issues bearing on the history of the geosciences. The History of Science Society held its annual meeting late in 1984 in Chicago. There were sessions on the evolution of natural-history museums, the theological structure of Victorian science, and the ongoing program to edit and publish Charles Darwin's correspondence.

James HUTTON received attention far away from his native Scotland as Robert GINSBURG (University of Miami, Fla.) organized a party to celebrate the 200th anniversary of the April 1785 presentation of Hutton's theory of the Earth to the Edinburgh Geological Society. Jazz, boat rides, and beach parties were part of the festivities, which HUTTON would probably have appreciated, if not fully comprehended.

The American Geophysical Union met in May in Baltimore, where its active Committee on the History of Geophysics held a technical session. In 1985 the Committee also produced the second volume of its informative *Newsletter*. Berkeley, Calif., was the site, in August, of the 17th International Congress on the History of Science. Symposia or technical sessions were held on earth science in the 19th and 20th centuries, DARWIN and the impact of Darwinism, the theory and philosophy of evolution, and the origins of modern geology and geophysics. Congress organizers produced a 2 volume set of abstracts, arranged by topic, which provides access to a wide variety of issues in the history and philosophy of science.

The development of concepts relating to ancient and modern reefs was the focus of the History of Geology Symposium, held in October, in Orlando, Fla., at the annual meeting of the Geological Society of America.) J. GREGORY (University of California, Berkeley) organized the symposium, which featured discussions ranging from the reception of Darwin's theory of

reef growth on a subsiding platform to such topics as the Permian Reef of West Texas and Silurian reef complex surrounding the Michigan Basin. Also at the Orlando meeting, a technical session on the history of geology was devoted to topics as diverse as the evolution of geological displays at the Smithsonian Institution, biographic sketches of paleobotanist D. WHITE and Michigan pioneering geologist D. HOUGHTON, and the recent history of field work on the North Slope of Alaska. L. LAPORTE (University of California, Santa Cruz) painted an interesting portrait of G. G. SIMPSON and his selective use of Darwin's writing to further his own visions, of how evolutionary theory could serve as the basis of an optimal world view.

The History of Science Society held its annual meeting in early November in Bloomington, Ind. Presentations of specific interest to geologists concerned isostasy, ancient geography, science and technology associated with the Texas oil industry, and several papers devoted to general questions such as the mutual relevance of history and philosophy of science.

C. SCHNEER (University of New Hampshire) was honored at the GSA meeting with the History of Geology Division Award. In giving the award, U. MARVIN (Harvard-Smithsonian Astrophysical Observatory) highlighted SCHNEER's valuable contributions to the history of geology, noting that SCHNEER is also a scholar in mineralogy. The need to dichotomize one's interests is true for most geologists who are also researchers in the history of geology, making the current level of interest and involvement in geoscience history all the more noteworthy.

Youthful but maturing vigor continues to be displayed by the History of Earth Science Society and the Geological Society of America's History of Geology Division. After 4 years, HESS now has more than 500 members and 100 institutional subscribers, from 23 countries, to its journal, *Earth sciences history*. That journal has been a significant addition to the professional literature; it incorporates book reviews, notices and calendars, and substantive articles on a wide spectrum of issues relating to the development of the geosciences. E. YOCHELSON (US. Geological Survey, Washington, D.C.) has done an excellent job as secretary-treasurer in recruiting new members. W. A. S. SARGEANT (University of Saskatchewan) is the 1985 president, and C. SCHNEER is president-elect.

The History of Geology Division's *Newsletter*, currently edited by M. ALDRICH (AAAS) is a valuable compendium of information concerning not only Division activities, but programs and works-in-progress of historical

consequence from around the world. President-elect for the Division is J. Th. DUTRO Jr (US Geological Survey, Washington, D.C.).

Yet another group devoted to further understanding of the history of the geosciences in the US National Committee on the History of Geology. The Executive Council of USHIGEO, whose chairman is C. NELSON (US Geological Survey, Reston, Va.) is currently involved with planning international meetings and serving as American liaison with the International Commission on the History of Geology.

K. B. BORK

USSR

In the USSR there is a standing Commission of the Academy of Science of the USSR on the History of Geological Knowledge and Geological Exploration of the USSR (COGI) for performing the following tasks:

- Organization of and participation in conferences, symposia and various meetings on the history and methodology of the geological sciences.
- Preparation and approval of books and studies on the history of geological sciences.
- Co-ordination of this type of historical research in the different republics and regions of the Soviet Union.
- To preserve and keep alive the memory of prominent scientists and outstanding events in the history of Earth Sciences.
- Conservation of unique geological objects.

Within the above scope the most important events in 1985 were the following:

- Meeting of the Soviet National Subcommission of the History of Geology (SNIGEO), with reports on the activity of the 15 regional branches and presentation of scientific papers.
- Transcaucasian Conference on the History of Sciences, with a Section of Earth Sciences.
- 14th Baltic Conference on the History of Sciences with a Section of Earth Sciences.
- Meeting discussing the history of geological exploration in Belorussia.

– 14 scientific sessions devoted to prominent Russian geologists, such as V. I. VERNADSKY, G. P. HELMERSEN, A. N. ZAVARITSKY, E. S. FEDOROV, A. E. FERSMAN etc.

– Celebrations on the occasions of the 60th anniversary of the Geological Institute of Georgia, and of the 25th anniversary of the Geological Institute of the Far East.

– In the course of different specialized geological conferences several papers of historical interest were presented.

– Two Candidate's Theses in the field of the history of geological sciences were accepted.

During 1984–1985 more than 100 shorter papers and altogether 28 books were published on the subject.

The Soviet Corresponding Members of INHIGEO accomplished the following: L. A. GOLDENBERG, SH. F. MEKHTIEV, E. G. MALAKHOVA, E. E. MILANOVSKY, E. A. RADKEVICH, I. A. REZANOV, S. I. ROMANOVSKY, YU. YA. SOLOVIEV, V. E. KHAIN and I. I. SHAFRANOVSKY wrote papers on various themes, and some of them also presented lectures.

V. V. TIKHOMIROV, vice president of INHIGEO, delivered lectures on the history of geology at the 12th INHIGEO Symposium in Edinburgh (UK) and at the 8th Congress on the Mediterranean Neogene Stratigraphy in Budapest (Hungary). Besides, he wrote several papers and was engaged in the preparation of the bilateral GDR–USSR symposium on the history of geology and that of a conference entitled "Problems of Development in Geology (Historical Aspect)". Two corresponding Members of INHIGEO, I. V. BATYUSHKOVA and A. I. RAVIKOVICH retired in 1985 and did not report on their activities. Two other corresponding members, YU. A. ANISIMOV and A. S. POVARENYYKH died in 1985 and early 1986, respectively.

Publications (in Russian)

1984

BELOV N. V.–SHAFRANOVSKY I. I.: Aleksey Vasilievich Shubnikov 1887–1970. – Leningrad, Nauka. 221 p.

Explorers of the Komi region: a bibliography of recommended readings. – Syktyvkar, Komi. 96 p.

- FOTIADI E. E. (ed.): Vsevolod Vladimirovich Fedynsky 1908–1978. — Moscow, Nauka. 129 p.
- The Geological Institute and the production of mineral fuels 1934–1984. (A historical review.) — Moscow, Nauka. 88 p.
- PASETSKY V. M.: Adolf Yakovlevich Kupfer 1799–1865. — Moscow, Nauka. 207 p.
- SOKOLOV V. A.: Vladimir Maksimilianovich Timofeev 1884–1935. — Leningrad, Nauka. 123 p.
- SOKOLOV V. A. (ed.): Prominent scientists of the Geological Committee. — VSEGEI. Leningrad, Nauka. 274 p.
- TIKHOMIROV V. V. (ed.): M. A. Usov's scientific heritage (Studies in the history of geological knowledge. No. 23). — Novosibirsk, Nauka. 222 p.

1985

- ANISIMOV YU. A.—ONOPRIENKO V. I.: Feodosy Nikolaevich Chernyshev 1856–1914. — Moscow, Nauka. 300 p.
- BEZBORODOV M. A.: Dmitry Stepanovich Beliankin 1876–1953. — Moscow, Nauka. 191 p.
- FILIPPOVA N. V. (comp.): V. I. Vernadsky's letters to A. E. Fersman. — Moscow, Nauka. 214 p.
- The Geological Institute of the Far East, 1959–1984. — Vladivostok. 87 p.
- GOLDENBERG L. A.: Mikhail Spiridonovich Gvozdev: Beginning of the 18th century till after 1759. — Moscow, Nauka. 172 p.
- KAZNACHEEV V. P.: The science of the biosphere: Studies on V. I. Vernadsky's scientific oeuvre. — Moscow. 79 p.
- KULIKOV M. V.—BELENKOV V. S. (eds.): The role of palaeontology in the development of the geology in the Soviet Union (Proceedings of the 27th session of the All-Union Palaeontological Society). — Leningrad, Nauka. 180 p.
- KUZNETSOV V. A. (ed.): P. A. Tutkovsky's contribution to the investigation of the Earth's crust in Belorussia. — Minsk, Nauka i tekhnika. 114 p.
- MARKIN V. A.: Petr Alekseevich Kropotkin 1842–1921. — Moscow, Nauka. 208 p.
- ONOPRIENKO V. I.—POVARENYYKH A. S.: Mineralogy: past, present and future. — Kiev, Naukova dumka. 160 p.

- ONOPRIENKO V. I. (ed.): History and methodology of the geological sciences. — Kiev, Naukova dumka. 122 p.
- PERELMAN A. I. (ed.): Aleksandr Mikhailovich Ovchinnikov 1904—1969. — Moscow, Nauka. 188 p.
- POSTNIKOV A. V.: The development of cartography and the problems of the usage of old maps. — Moscow, Nauka. 214 p.
- SKRIPCHENKO I. S. (ed.): The problems of the Earth and Universe in P. N. Chirvinsky's oeuvre. — Rostov, Rostov Univ. 136 p.
- SOLOVIEV S. L.: The history and prospects of development of marine seismology. — Moscow, Nauka. 152 p.
- TIKHOMIROV V. V. (ed.): Pages from the history of the Moscow Geological School. — Moscow, Nauka. 183 p.
- TSVERAVA G. K.: Dmitry Alekseevich Golitsyn 1734—1803. — Leningrad, Nauka. 184 p.
- VINOGRADOV V. A.—LIKHTENSTEIN E. S. (eds.): Stanislav Vikentievich Kolesnik. — Moscow, Nauka. 94 p.
- VINOGRADOV V. A.—LIKHTENSTEIN E. S. (eds.): Mikhail Ivanovich Varentsov 1902—1977. — Moscow, Nauka. 65 p.
- VOLFSON F. I.—ZONTOV N. S.—SHUSHANGIA G. R.: Petr Yakovlevich Antropov 1905—1979. — Moscow, Nauka. 94 p.

V. V. THIKHOMIROV

Venezuela (1984—1985)

The monthly journal "Boletin de Historiade las Geociencias de Venezuela" (in Spanish) was started in June 1984. Besides papers on the history of geology, this journal also contains bibliographical compilations of a wider range that may be useful for further historical investigations. The "Boletin", to a limited extent, is supported by the Department of Geology of the Universidad Central de Venezuela (mailing expenses, photocopying etc). With assistance by A. SINGER and J. GRASES the "Boletin" is edited by F. URBANI. At present only 45 copies of an average 30 pages per issue (format: 21x28 cm) are published. A few copies are distributed free, exclusively to major Venezuelan and foreign libraries, and not to individuals, while the rest are sold in order to cover the publication costs. Up to December 1985, 19 issues

have been published. Those, both individuals and institutions, interested in this newsletter, may ask for a free index published to date and a price list at the following address: *B. H. GC. V. Apartado 47.028. Caracas 1041A, Venezuela.*

In November 1985, in the course of the annual meeting of the Venezuelan Association for the Advancement of Science a session was held, entitled "Hommage Forum to A. JAHN (1867-1940), 45 years after his death", organized by F. URBANI and with contributions, presented by C. SCHUBERT, E. WAGNER and E. TILLET. A. JAHN was a Venezuelan naturalist of German parents. His main field was the geography but he also notably contributed to the Venezuelan geology being the author of the first book on the geology of the country "Ezbozo de las formaciones geologicas de Venezuela" published in 1921. In the course of the "Forum" JAHN's biobibliography was also presented, and his works on geology, geography, ethnology, archaeology and botany were discussed in detail. Full text of the contributions hopefully will be published in 1986.

F. URBANI

INDIVIDUAL REPORTS

In 1985 Prof. G. V. *GEORGIEV* (Bulgaria) prepared for publication the manuscripts of two books:

- 1 *My encounters with prominent geologists.* (D. S. Korzhinsky, E. A. Kuznetsov, V. V. Tikhomirov, T. F. W. Bart, F. J. Turner, E. Raguin, C. E. Wegmann, K. R. Mehnert, G. Fischer, H. G. F. Winkler, G. Marinos, M. Saadi.)
- 2 *With knapsack and a geologist's hammer through Europe.* (Moscow, Leningrad, Olymp, the Higher Tatra Mts, Prague, Přeborn, Central Bohemia, Weimar, Harz Mts, Rügen, Baltic Sea, through South Sweden to Oslo, Göteborg, Paris, the Alps, Pisa, Mont Blanc tunnel, Rome, Florence, the northern coast of the Egean, Bulgaria.)

I. I. *SHAFRANOVSKY*'s (USSR) publications in 1985:

- 1 *Symmetry in nature* (in Russian). — Leningrad, Nedra. 168 p. (with a short history of crystallography).
- 2 *Harmony of the mineral world* (in Russian) in *Tikhookeanskaya geologiya*. No. 2. pp. 83–86. [Comparison of the statistics of minerals in 1860 (by Naumann), 1890 (Dana, Liebedev), 1966 (Povarennykh), 1982 (Shafranovsky, Feklitshev), the percentages remain the same.]
- 3 Centenary of the publication of E. S. Fedorov's classical work: "*Outlines of the science of figures*". *Zap. geol. obshch.* Vol. 114, pp. 521–527 (co-authors: V. A. Frank-Kamenetzky, P. L. Dubov).

The manuscript of a monograph on A. Bravats (1811–1863), written together with P. L. Dubov, was completed.

The 3rd volume of the "*History of Crystallography*" (first half of the 20th century) is in preparation.

YU. YA. *SOLOVIEV* (USSR)

The work on the history of palaeogeography in the USSR was continued. During 1985 he was active as:

- Deputy head of the Laboratory for the History of Geology.
- Vice President of the Commission of the USSR Academy of Sciences on the History of Geological Knowledge and of the Geological Exploration of the USSR.

— Member of the Board of the Soviet National Subcommittee on the History of Geology.

— Member of the Historical Commission of the All-Union Mineralogical Society.

He published (in Russian) 5 papers in 1985:

- 1 *V. V. Tikhomirov — initiator of the research into the history and methodology of geological sciences* (on the occasion of his 70th birthday), with V. V. Menner et al. — *Izv. AN SSSR, ser. geol.* No. 10. pp. 116–118.
- 2 *N. A. Golovkinsky's ideas on the problems of stratification, stratigraphy, facies analysis, palaeogeography and geomorphology* (on the occasion of the 150th anniversary of his birthday). — *Izv. AN SSSR, ser. geol.* No. 1. pp. 116–126 (together with S. I. Romanovsky).
- 3 *The beginnings of regular research in the field of the history of geological sciences.* In "Pages from the history of the Moscow geological school". — Moscow, Nauka. pp. 169–181.
- 4 *On three sessions of the International Geological Congress held in the USSR.* — *Izv. vysshikh uchebnykh zav., geol. i razv.* No. 4. pp. 93–101.
- 5 *The establishment and main stages of the development of palaeogeography as a scientific discipline.* In "Methodology of lithological research". — Novosibirsk, Nauka. pp. 81–85.

REVIEW OF BOOKS AND PAPERS

China

WEN GUANG (1985): *An Archaeogeological Study in Ancient Chinese Jade*. — Scientific Papers on Geology for International Exchange, Vol. 6. 265–277, 3 plates (in Chinese, with English summary).

China is the most famous country where jade first was used and was rendered a high estimation above all other gemstones, humanizing it as a sign of morale, rite and power. The true jade used in ancient China was nephrite. Ancient Chinese examined the jade first by its quality, and second by its colour.

Nephrite is a compact variety of calcic amphibole in the tremolite–actinolite series generally with interfelted fibrous microstructure. The quality of nephrite depends on its microstructure the relative size of fibres consisting of crystal bundles and the amount of impurity minerals. The colour of nephrite depends predominantly on its content of iron, mainly of ferrous iron. The technological development in ancient China was recorded in the *Book of the Former State Yue* written in the Warring States (475–221 B.C.) as four successive stages: The Stone, Jade, Bronze, and the Iron ages. The archaeological investigations conducted in the past decades has proved that in China a Jade age did exist. Its duration is equivalent to the Neolithic age.

The Hsia, Shang and Chou dynasties (about 24–3 cent. B.C.) were the Bronze age of China, when the technology of jade carving gained a further remarkable development. As a matter of fact, there were records concerning the use of jade in bronze inscriptions and in the ancient documents, indicating that nephrite of Kunlun region was introduced into China proper as early as before Zhangqian's travels to western regions (139–126 B.C.). Thus has been put forward the problem of search for nephrite in China proper.

(Autoreferate)

France

F. ELLENBERGER: *Recherches et réflexions sur la naissance de la cartographie géologique, en Europe et plus particulièrement en France*. — Histoire et Nature. N° 22/23, 1983, pp. 3–54 (published July 1985).

The author, beyond doubt one of the most prominent living historians of geological cartography, published, in an enlarged form, his paper read at a COFRHIGEO meeting and at the 10th (Budapest) Symposium of INHIGEO (August 1982). In fact, we have in hand the hitherto most complete inventory and critical appraisal of the early French (up to 1820) mineralogical and geomorphological maps. Even the never realized projects are discussed. Moreover, the early Swedish and German geognostic maps (mostly of mineralogical and mining content) are dealt with, emphasizing their impact upon the evolution of geological cartography in France.

The Italian Marsigli's map (1726) of the historical Hungary is cited as the first mineralogical map. The remarkable contribution by PALLAS (S. Petersburg, 1777) is also duly appreciated, at least in a footnote. The name and work of STASZIC is missing. It is no wonder, since this Polish pioneer was one of those who stood outside the two (French and German) main trends of development thoroughly studied and conscientiously presented by Prof. ELLENBERGER.

The high-quality black-and-white figures deserve special attention. Among them Hermelin's map has been hardly known and Bernard's map is genuine novelty. The author's fascinating style adds a particular flavour to the pleasure of reading.

E. DUDICH

Great Britain

D. F. BRANAGAN 1985: *Philip Parker King, colonial anchor man*. In A. WHEELER—J. H. PRICE (eds.): *From Linnaeus to Darwin: Commentaries on the history of biology and geology*. — Society for the History of Natural History. Spec. Publ. No. 3, pp. 179—193, London.

T. G. VALLANCE

Hungary

J. HÁLA (ed.) 1985: *Neogene mineral resources in the Carpathian basin. Historical studies on their utilization*. — Hungarian Geological Survey. 625 p. Budapest.

The studies collected in the present volume offer several examples for the utilization of mineral resources from the prehistoric times up to the present, their role in the social and economic life of the peoples living in the Carpathian basin. Another aim was to describe the process of development from the collecting of minerals to up-to-date technologies. Primitive implements and procedures, even if to a limited extent, are still applied.

The papers discuss both the resources utilized in the most ancient times (obsidian, flint, rock-salt etc) and the recently discovered ones (alginites).

The volume is divided into three main sections. The first section consists of studies discussing the geological research, mapping and geophysical exploration. The second section includes studies on the exploration, exploitation and utilization of different mineral resources such as fuels (hydrocarbons, brown coal, lignite), ores (of precious and non-ferrous metals, and of iron), non-metallic mineral resources (rock-salt, different minerals and rocks, water), miscellaneous. The third section contains only one study dealing with the ethnography of mining.

This volume was edited in and published by the Hungarian Geological Institute. Beside the survey geologists, experts of altogether 12 other Hungarian institutions (research institutes, exploration companies, universities and museums) are represented among the authors of this volume, of interdisciplinary character.

It was issued on the occasion of the VIIIth Congress of the Regional Committee on Mediterranean Neogene Stratigraphy, in the frame of which the first Symposium on European Late Cenozoic Mineral Resources was held (September 1985, Budapest, Hungary.)

The "Contents" are added below.

Contents

Preface (G. HÁMOR)

Geological researched, mapping and geophysical exploration

- G. CSÍKY: Geological research in Hungary prior to 1825 and its significance in the exploration of Neogene mineral resources
- K. BREZSNYÁNSZKY: A brief history of geological mapping in Hungary with special regard to the Neogene mountaineous regions
- A. RÓNAI: Geological investigations in the lowland type regions

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- V. DANK: Hydrocarbon exploration in Hungary
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- L. ZSÁMBOKI: The history of the mining of Neogene noble- and non-ferrous ores in Hungary
A. UZSOKI: Gold panning in the Carpathian Basin
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Non-Metallic Mineral Raw Materials

- Á. KERÉKES: Chapters from the history of rock-salt mining in Hungary
K. T. BIRÓ: Neogene rocks as raw materials of the prehistoric stone artifacts in Hungary
P. KERTÉSZ: Neogene ornamental and building stones in Hungary
F. BAKÓ: Popular stone architecture in the Carpathian Basin
J. HÁLA: Quarrying and manufacturing of stones for road construction in Hungary
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G. SOLTI: Agricultural utilization of Neogene mineral raw materials in Hungary
I. DOBOS: Exploration of subsurface waters in the Neogene basins

Miscellaneous

- E. BÁCSKAY: Prehistoric mining and utilization of some mineral raw materials in the Carpathian Basin and in the adjacent areas
J. HÁLA: Trades and popular crafts utilizing mineral resources in the Carpathian Basin

Ethnography of mining

- I. HEGYI: Chapters from the ethnography of mining
J. HAJDÚ-MOHAROS: Index of geographical names

G. HÁMOR

Italy

- 1 A. CASTELLARIN—A. ZUCCARI (eds.) 1984: *Cento anni di geologia Italiana*. Volume giubilare. (Hundred years of Italian geology, Jubiliary volume.) — Società Geologica Italiana. Roma. 444 p., 125 figs.

A collection of papers presenting different aspects of the history of the Italian Geological Society.

- 2 B. ACCORDI 1984: *Storia della geologia*. (History of geology.) — Zenichelli. Bologna. 114 p., 60 figs., 16 pls.

A brief treatise on the history of geology written by Prof. Accordi of the Rome University, Corresponding Member of INHIGEO.

- 3 B. ACCORDI 1985: *Bibliografia italiana regionata sulla storia delle Scienze Geologiche*. (Italian bibliography on the history of geological sciences.) — Ann. Univ. Ferrara, Schritti in onore di Piero Leonardi. Ferrara. pp. 35–66., 6 figs.

- 4 R. MALARODA 1985: *Piero Leonardi: la vita e le opere scientifiche*. (P. Leonardi: his life and scientific works.) — Ibidem, pp. 5–33.

On the occasion of P. Leonardi's 70th birthday.

G. PICCOLI

Poland

"*Studia Kieleckie*". — Quarterly Bulletin of the Kielce Scientific Society 1985, 1 (41):143. Kielce.

A scientific session was organized in Kielce to celebrate the 200th anniversary of creation (in 1782) of the Ore (or Mining) Commission as the highest Polish institution supervising all the activities in the fields of geology, mining and metallurgy. The presented lectures are published in this volume. A. S. KLECZKOWSKI, W. RÓŻAŃSKI and Z. WÓJCIK deal with the main activities of this Commission. An analysis of mining law in Poland in 18th century is presented by J. PAZDUR, whilst the merits of the Commission in the reactivation of abandoned lead mines in Oikusz—by D. MOLENDĄ. S. CZARNIECKI's lecture is devoted to private initiative in ores exploration. Very interesting is the analysis by Z. RUBINOWSKI of geological contents of

the mining plan of Miedziana Góra near Kielce prepared for the visit of K. SZEMBEK, president of the Ore Commission in 1782. The essential types of ores in this deposit and their mode of occurrence are represented.

W. NARĘBSKI and Z. WÓJCIK

Nowe Roździeńsciana. Studia o Walentym Roździeńskim i jego dziele. (New Roździeńsciana. Studies on W. Roździeński and his monograph.) – Officina ferraria from 1612. Ed. A. JAROSZ, Ossolineum Publ. 1985, 239 p. Wrocław. (In Polish, English and German summaries.)

In 1612 W. ROŹDZIENSKI published in Cracow a poem dedicated to metallurgical, mining and "mineralogical" works. The only copy of this poem preserved is deposited in the National Library in Warsaw. It was several times reedited, also in English "A Polish poem of 1612 describing the noble craft of ironwork. Cambridge, Massachussets, London 1976, 150 p."

The reviewed volume contains several papers read during the scientific session dedicated to W. ROŹDZIENSKI. Geological and mineralogical problems in Officina ferraria by W. ROŹDZIENSKI are presented by Z. WÓJCIK. ROŹDZIENSKI's opinions on the methods of exploration of iron, lead and silver deposits and on identification of various iron ore types (melting and hammering of pig-iron) are discussed. Other papers deal with the history of mining (B. RUDNICKI), geographic nomenclature (T. BOGACZ and J. JANCZAK) and metallurgy (B. PACZAŁA). Some new materials concerning ROŹDZIENSKI's biography are published (S. MICZULSKI) as well as a fairly rich review of his publications. The presented papers can be of interest for historians of geology and technology of various countries of Central Europe, especially Czechoslovakia and Germany.

A. GAWEL and W. NARĘBSKI

T. BIENKOWSKI: *Natural Sciences in Poland in the 16th Century.* – Ossolineum Publ. 1985, 170 p. Wrocław. (In Polish, with English and German summaries.)

This book deals with traditional sources of sciences (including the Bible), problems of natural philosophy of the Renaissance period (including its ancient origins e.g. of ARISTOTLE), development of new research horizons (influenced by geographic discoveries) and the formation of the heliocentric concepts of N. COPERNICUS. It also contains interesting data on the collections of physicians (e.g. well-known herbaria), general geographic interests in the area of Poland and reflexions on nature in J. KOCHANOWSKI's poems. The author based his considerations both on old prints and on later historical papers. The book is illustrated by woodcuts.

The author is a classical philologist, interested in the history of education. Consequently, the book is rather a popular outline of the state of natural sciences in Poland in 16th century. The reader can deduce that some topics fascinated the author especially, such as: phytotherapy and, particularly the magic attributes of stones. The formation of opinions on the structure of universe is presented, while the geological and mineralogical problems of that epoch are reduced to a minimum. The author has not sufficiently used the available data on the history of mineralogy (e.g. the publications by H. LABĘCKI and J. MOROZEWICZ are not mentioned), including manuscripts (e.g. from the Jagellonian Library in Cracow). Besides, there is no more complete analysis of the scientific aspects of "belles-lettres" of that epoch. Nevertheless, this book is interesting not only for Polish specialists of this subject and may stimulate other historians of science to study the problems in question in more detail.

Z. WÓJCIK

J. SKOCZYŁAS: *Development of studies on the geological setting of Poland in 1918–1939*. (Geological research, their organization and related problems of protection of inanimate nature.) – Ossolineum Publ. 1985, 263 p. Wrocław. (In Polish, with English and Russian summaries.)

This monograph contains general data on organization of geological survey and research in Poland during the interwar period. They refer mainly to the activity of the State Geological Institute in Warsaw and of some associations as: Polish Geological Society, Copernicus Association of Naturalists, Physiographic Commission and Museum of the Earth Society. Less attention is paid

to the activity of university centres in Cracow, Poznan, Lvov, Vilno and Warsaw and of the Mining Academy in Cracow. The role of the Council for Protection of Nature and of the Museum of the Earth in protecting inanimate nature is exposed.

The presented data are based predominantly on publications of the State Geological Institute: "*Posiedzenia Naukowe*" (Scientific Meetings), "*Sprawozdania PIG*" (Reports), "*Prace PIG*" (Transactions), "*Bulletin*" etc. Moreover, some informations from "*Rocznik PTG*" (Ann. de la Soc. Geol. Pol.), "*Kosmos*" (Periodical of Copernicus Association of Naturalists), "*Wiadomości Muzeum Ziemi*" (Transactions of the Museum of the Earth), "*Zabytki Przyrody Nieżywionej*" (Monuments of Inanimate Nature) etc were used by the author. On the other hand, documents owned by private persons, as well as other state and social institutions were not taken into account. The same refers to the activities of geological departments at the universities of Vilno and Lvov (actually USSR). Finally, the author did not examine archival materials in Austria, Czechoslovakia, Germany, Roumania and other countries.

In conclusion this book may be considered only as a convenient starting point to the problem it is dedicated.

Z. WÓJCIK

USA

E. T. DRAKE and W. M. JORDAN (eds.) 1985: *Geologists and ideas: A history of North American geology*. — GSA Centennial Special Volume. No. 1.

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BOLT: The development of earthquake seismology in the western United States

LOWMAN: Geology from space: A brief history of orbital remote sensing

U. MARVIN

M. J. S. RUDWICK 1985: The Great Devonian Controversy: The Shaping of Scientific Knowledge among Gentlemanly Specialists. — Chicago, University of Chicago Press.

A highly fascinating lecture for everybody interested in the history of geological concepts and/or human behaviour.

E. DUDICH

MISCELLANEOUS

BARRANDE centenary celebrated in Prague

In 1983, the National Museum in Prague (Czechoslovakia) organized a commemorative scientific session on the occasion of the 100th anniversary of Joachim BARRANDE's death, accompanied by an exhibition, several newspaper articles and radio broadcasts. J. HAUBELT, corresponding member of INHIGEO was one of the main speakers lecturing on "J. BARRANDE and the Bohemian society".

J. BARRANDE was born in Saugues, Département Haute-Loire, France on 11th August, 1799. Having graduated as an engineer from the École Polytechnique in Paris, he worked in Bordeaux and Samure for a couple of years. In 1830 he became tutor of the Count of Chamborde of the Bourbons. After the July revolution he accompanied the Bourbons to Scotland and then to Prague. In 1833 he gave up his job as a tutor and became involved in the construction of the railway line from Prague to Plzen. It was in the course of this work that he discovered the abundant fossil localities (rich above all in Trilobites) at Skryje and Tyřovice, W of Prague. These formations, after him, are now called "Barrandian". From that time on he devoted himself exclusively to palaeontological studies. BARRANDE collected and determined the Silurian fossils of Central Bohemia, publishing his results in his famous work "Système Silurien du Centre de la Bohème". BARRANDE transferred his collection to the National Museum in Prague, thus laying the foundations of one of the largest palaeontological collections in Central Europe.

BARRANDE earned great merits not only as a scientist but also as an enlightened personality, supporting morally the aspiration of the Czech nation for independence and equality among the European peoples. Jan NERUDA, the famous Czech poet wrote about him: "A Frenchman, proud of his origin and of his nation, he attached himself with much affection to ours...".

J. URBAN

The word "geologists" ("jheologos") in a 16th century Spanish codex

It was generally accepted that the word "geology" had been introduced by M. P. ESSHOLT (1619–1669) with the publication of his book "Geologica Norvegica" (1657) and the "geognosy" was substituted with "geology" by H. P. SAUSSURE (1740–1790).

In the National Library (Madrid) there is a codex, attributed to Juanelo TURRIENTES (Cremona, 1511 – Toledo, 1585), entitled "Los 21 libros de los Ingenios y Máquinas", consisting of five volumes. In the first book, on the fifth page, the term "jheologos" appears in the following sentence:

"La primera es muy antiquissima, los jheologos dizen, que toda agua viene del mar." ("The first one is very ancient; the geologists say that all waters come from the sea".)

No date can be found in the codex. It is supposed to have been written by TURRIENTES during his stay in Toledo. The watermark of the paper was used between 1500 and 1597, while the "filipina" type of letters was used between 1530 and 1600. Accordingly, the codex must have been written in the second half of the 16th century.

One should also keep in mind that King Philip II. strictly prohibited all foreign influence in the use of scientific terms in 1557. The orthography is characterized by the undifferentiated use of "j" and "g", and by adding a superfluous "h" in order to create an impression of high erudition.

J. H. LOPEZ de AZCONA

FORTHCOMING EVENTS

13th Symposium of INHIGEO, 23 Sept.—1 Oct. 1987.

Co-sponsored by the CNR (Centro Nazionale delle Ricerche) of Italy, it will be focussed on the following subjects:

- Development of Palaeontology (all branches).
- Development of Stratigraphy (with emphasis on *biostratigraphy*).
- History of Geological Sciences in Italy.

The aim of the inserted field trip is to illustrate the history and evolution of Italian geology from the 18th century to our times, visiting the classical outcrops that inspired Spallanzani, Vallisneri, Brocchi and other Italian and European scientists to put forward their hypotheses on various geological phenomena. The excursion will also provide an opportunity to discuss the present-day interpretation of the Tertiary belt of the NW Apennines.

Place: Congress Hall, Pisa
University, Padova

Preliminary Agenda:

Sept. 23 (Wednesday): arrival and registration in Pisa.

Sept. 24 (Thursday): Scientific Session, part I.

Sept. 25 (Friday): Scientific Session, part II. — Business Meeting of INHIGEO's Board.

Sept. 26—30 (Saturday—Wednesday): Geological and historical field trip by bus: Apuane massif, across the NW Apennines and in the Venetian Prealps, ending in Padova.

October 1 (Thursday): Scientific Session, part III, in Padova. — Closing of the Symposium.

This schedule would allow the participants to pass over to Yugoslavia to attend the Vth Meeting of the European Geological Societies (MEG-5) in the town of Dubrovnik.

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Trilateral regional meeting on the history of Geological Exploration of the West Carpathians prior to 1920 (Poland, Czechoslovakia, Hungary) 1988 (?)

The idea was brought up by the Polish group of INHIGEO members, and gained the full support of the Hungarian partners. The Czechoslovakian decision is, however, still pending, in spite of the personal efforts exerted by the Secretary General of INHIGEO.

14th Symposium of INHIGEO, July 1989.

It is to be held during and in connection with the 28th International Geological Congress, Washington D.C., USA, 9–19 July 1989.

The IGC Program Committee has accepted two topics to be discussed within the frame of two different Symposia:

- The idea of time: changing concepts of the antiquity of Man and the Earth.
- The origin, distribution, and adequacy of mineral and energy resources: historical evolution of geological, mining and environmental perspectives.

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