International Union of Geological Sciences
International Union of the History and Philosophy of Sciences
International Union für Geologische Wissenschaften
Internationale Union für Geschichte und Philosophie der Wissenschaften

International Commission on the History of Geological Sciences (INHIGEO)
Internationale Kommission für Geschichte der Geologischen Wissenschaften (INHIGEO)

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of methodology, economics and teaching are equally taken into consideration."

The topics chosen for international symposia in the past were indeed those which, above all, met the interests of scholars of earth sciences in historical questions. We can say that all symposia got a good response, were attended by a great number of scholars and offered stimulating programmes. In addition to that they were accompanied by geological and historico-cultural excursions. The results of the symposia were published in various kinds of publications.

Following a request for more detailed information about the international symposia held in the past we give a short survey below. It is confined to the topics, dates and places of the symposia, the conveners authorized by INHIGEO and some publications. Information about the publication of papers and about reports on the symposia in, however, not complete.

Ith Symposium - Foundation of INHIGEO
Topic: "History of Geology"
6 - 10 June 1967, Yerevan, Armenia, Soviet Union
Convener: V.V. Tikhomirov
Public.: - Programme and Summaries of the papers
(Material of the Constituent Assembly of INHIGEO and Papers of the Symposium; in English and Russian)

IInd Symposium - XXIIIrd International Geological Congress,
Section 13
Topic: "History of Geology"
August 1968, Prague, Czechoslovakia
Convener: V.V. Tikhomirov, K. Zapletal
Public.: - History of Geography, In: Report of the 23rd Session IGC, Prague 1968, Proceedings of Section 13 "Other Subjects", pp. 319 - 354, (in English)
- Problems of the History of Geological Sciences. IGC, 23rd Session; Reports of Soviet Geologists, Problem 13, Moscow 1968, 135 pp. (in Russian)
IIIrd Symposium.
Topic: "History of Concepts on Mineral Deposits"
14 - 20 September 1970, Freiberg, German Democratic Republic
Convener: M. Guentau
Public: - Summaries of the Papers, Freiberg (Saxony, GDR) 1970, (in English 168 pp., in German 172 pp., in Russian 164 pp.)
- Guide for Excursions, Freiberg (Saxony, GDR) 1970 (in English 80 pp., in German 80 pp., in Russian 74 pp.)
  (in German, English and French)

IVth Symposium - XXIVth International Geological Congress, Symposium 106
Topic: "History of Concepts of Precambrian Geology"
23 - 28 August 1972, Montreal, Canada
Convener: J.B. Waterhouse

Vth Symposium.
Topic: "History of Teaching Geological Sciences"
1 - 6 July 1974, Madrid and Cordoba, Spain
Convener: J.M. Lopez de Ascona
Public: - General Programme V o Reunion Cientifica, Madrid 1974, 29 pp. (in English and Spanish)
- Resumenes / Abstracts V o Reunion Cientifica, Madrid 1974, 94 pp. (in English and Spanish)

VIth Symposium.
Topic: "Charles Lyell Centenary Symposium"
1 - 5 September 1975, London and Oxford, Great Britain
Convener: D.A. Bassett
- D.A. Bassett: An annotated chronology of some of the significant dates in the development of geology and its allied subjects in Britain during the first half of the nineteenth century. Prepared for the Charles Lyell Centenary Symposium, Cardiff 1975, 11 pp., 2 ill.

VIIth Symposium - XXVth International Geological Congress, Section 17 E, Symposium 117.2
Topic: "The Growth of Geological Knowledge in the Age of Geographical Exploration"
23 August 1976, Sydney, Australia
Convener: T.G. Wallance
- 25th IGC, General Proceedings, p. 124, Canberra 1977
VIIIth Symposium.
Topic: "Regional Influences on the Origin and Development of Geological Theories"
12 - 23 September 1978, Münster and Bonn, Federal Republic of Germany
Convenor: H. Hölder
- H. Hölder: VIIIth INHIGEO-Symposium Münster-Bonn (FRG), In: INHIGEO-Newsletter No 12, pp. 4 - 9, 30 - 34, Rostock 1978 (in English and German)
- H. Hölder (Ed.): Regionale Einflüsse auf Ursprung und Entwicklung geologischer Theorien, In: Münsterische Forschungen zur Geologie und Paläontologie, Heft 56, Münster 1983, 123 pp., 5 ill. (in German and English)

IXth Symposium - XXVth International Geological Congress
7 - 17 July 1980, Paris, France
Convenor: F. Ellenberger

- Le développement de la géologie de langue française dans ses relations internationales des origines à la mort de Cuvier (1832), In: Histoire et Nature, No 19 - 20, Paris 1981 - 82, 147 pp. (in English, French and German)

Xth Symposium.
Topic: "Development of Geological Mapping and Geocartography in Connection with Progress in Geological Thought"
16 - 23 August 1982, Budapest, Hungary
Convenor: E. Dudich
Public.: Xth INHIGEO Symposium Programme, Budapest 1982, 41 pp. (in English)
- Xth INHIGEO Symposium Abstracts, Budapest 1982, 103 pp. (in English, German, French)
- Xth INHIGEO Symposium, Proceedings, Akademia: Kiadó Budapest 1984 (in English) (in Print)

(publications marked by an asterisk contain most of the papers delivered at the symposium)

The series of symposia will be continued in the near future. In the summer of 1984, the Xth INHIGEO symposium on the history of mineralogy will be held in Moscow as part of the 27th International Geological Congress. Judging by the papers announced so far, it can again be expected that many interesting aspects of the history of geological sciences will be discussed at this symposium.

As concerns previous symposia, it may also be said that those meetings were of particular value which tried to combine historical aspects with questions relevant to current geological work. They were attended not only by scholars who take a particular interest in historical questions but also by professional colleagues doing research in modern fields of geological sciences. In many cases these scholars delivered papers, thus taking an active part in the symposia. Meetings of this kind have proved that the discussion of modern as well as historical aspects has a stimulating effect on the work in either field.

As far as future symposia are concerned, there are a number of topics which are of particular relevance to current research, and which have hardly been touched upon at previous symposia:
- ideas of catastrophism in geological thinking of the past and present,
- history of palaeontology,
- problems of the genesis of basalt and granite in the history of geological sciences,
- the recognition of geological time in the history of science (the character of geological changes in time; rhythms and cycles in geological processes; methods of determining geological time),
- history of stratigraphy,
- the relationship between geological knowledge and mining in history,
- history of the geology of mineral oil and natural gas,
- the foundation, development and effectiveness of Geological Surveys in history.

These topics are simply meant to be suggestions for future symposia. Possibilities of holding meetings on these or other topics in the coming years are currently being considered by a number of countries. It may also be said that symposia with a limited number of participants which were held independent of big congresses, have proved to be very successful, for this made it possible to concentrate the papers on the subject of the symposium. Personal contacts between scholars also helped to make the discussions more effective. Apart from many other activities of INHIGEO, international symposia will undoubtedly continue to play an important role in the future because they yield many concrete scientific results. In addition to that they serve the important purpose of promoting understanding and fruitful discussions between historians of geological sciences at an international level.

Martin Guntau

IIIrd GDR-USSR Symposium on the History of Geological Sciences (15 – 27 October 1983, Greifswald, German Democratic Republic)

After the first two GDR-Soviet symposium on the history of geological sciences held in Berlin/GDR (1975) and Yerevan/Armenia (1979) scholars of earth sciences, historians of science and philosophers of both countries met for their third symposium in October 1983. The topic of the symposium was "The evolution of philosophical and methodological ideas in earth sciences".

The symposium was organized by the study group "History and Philosophy of Geological Sciences" of the GDR Society of Geological Sciences and the School of Geological Sciences of the Ernst Moritz Arndt University Greifswald. It was supported by the USSR and GDR Academies of Sciences. The symposium was dedicated to the centenary of the death of Karl Marx. 20 scholars from the Soviet Union and 67 from the GDR participated in the meeting. The number of papers totalled 35, among them six main papers; 12 papers were read by participants from the Soviet Union, 23 by GDR representatives. On the occasion of the centenary of the birth of Aleksandr Evgenievich Pervman a small colloquium was held which included three papers and a Soviet documentary about Pervman. Two historic-cultural and geological excursions were organized after the symposium, which took the participants to Stralsund and the Island of Rugen.

In accordance with the subject of the symposium the papers delivered dealt with the following questions:
- dialectics of natural geological processes
- evolution of geological theories and concepts
- methodology of geological thinking (relationship between theory and practice, investigations of systems etc. in geological sciences)
- mechanisms of the development of knowledge in geological sciences

philosophico-methodological interpretations of views about earth sciences

The papers clearly showed that there are many possibilities for scholars of earth sciences, philosophers and historians of science to promote a fruitful exchange of ideas from an interdisciplinary point of view. The ideas presented in the main papers of A. Watzauer ("Validity and limitations of geological laws"), V.V. Tikhomirov and V.V. Gerbova ("On the question of the division into periods of individual branches of geology"), P. Richter ("Dialectics in geological research") and H. Hörz ("Questions of philosophers to scholars of earth sciences") were taken up in other papers in various ways. It should also be mentioned that, for the first time, geographers took part in the symposium, for example J.P. Gellert, who delivered one of the main papers entitled "Object and system of earth sciences".

Many interesting results and ideas related to the topic of the meeting were presented in the papers read. They have given new impetus to further research in this field. Of particular value were comments on the concept of law in geology, remarks about models in geological work, ideas about the development of theories in earth sciences, statements about the historical and actualistic methods, the philosophical interpretation of the work of important scholars of earth sciences in the past and contributions aimed at determining the subject matter of individual disciplines of earth sciences.

The IIIrd GDR-Soviet symposium was a further step towards successful cooperation between scholars of earth sciences from the GDR and the Soviet Union. The series of bilateral symposia will be continued in Baku/Azerbaijan in the autumn of 1985. The topic of this meeting will be "Development of ideas about the structure of the Earth".

E. Fabian (GDR)
Ju.Ja. Solov'ov (USSR)
History of Geology in the Federal Republic of Germany
(October 1982 - October 1983)

The appeal published in several periodicals to form a "Work group on the history of geology" has been met with general approval. The first meeting of the group will be held in 1984. It seems to be an advantage that non-professional geologists and paleontologists have been included in the work of the group.

W. Langer participated in a geologic-historical excursion in southern France. He published a small report on the mineralogist Karl Wilhelm Rose (1783 - 1835). Two more articles on the history of geology and paleontology of West Germany have been submitted for publication. In Münster/Westfalia, H. Hölder delivered a paper on the historical significance of Franz Lotze.

The work group "History of Geophysics in the German Geophysical Society" has published the second volume of its announcements (no. 1 and no. 2). No. 1, among other things, contains comments on historically-oriented articles in the Zeitschrift für Geophysik (1927 - 1971) no.2. Among other things, includes first short comments on the historical papers delivered at the UGG conference in Hamburg (1983).

W. Langer

Notes on the History of Geology in Bulgaria

The first records of the history of geology in Bulgaria can be found in the "Shestodnove" (Heraclemon) of Yoan Erarch (about 900). It mentions precious stones, gold and decorative rocks kept at the king's court in the capital Veliki Preslav of the first Bulgarian state (681 - 1014). Between 1014 and 1185 Bulgaria was under Byzantine rule. Information about Bulgarian geology of that time is given in the geography treatise of Ydrissi (12th century) and in Hystoria, vol. 2 by another Byzantine author, Yoannes Scylitzes (12th-13th centuries). As far as the time of the second Bulgarian state is concerned (1185 - 1393), the Trilission (Tarlis-Kataphita) reports about iron mining in 1347 and 1361. We also know that marble was used for sculptures and that methods used in ore mining and metal processing in Saxony were applied in Bulgaria.

Between 1393 and 1878 Bulgaria was under Ottoman rule. Some information about geology in Bulgaria of that time can be found in the works of Hadji Kaifa (1812), F. Hammer (1838), A. Boué (1840) and F. Hochstetter (1872).

First geological information about the time of the third Bulgarian state (since 1878) also came from foreigners (the French and Germans). First Bulgarian contributions to the history of geology were made by G.N. Zlatarski (Notes on the life, journeys and works of A. Boué - 1902) and Chr. Xarkov (Iron mines and madana (automotive forges) in the Samokov region - 1898). G. Bonchev wrote his works on the prehistory of Bulgaria (1900), on megalithic monuments in the Sakar mountains (1901) and on the scientific work of G.N. Zlatarski (1909/10). After World War I the following works were published: lv. Trifonov: Iron metallurgy in Bulgaria (1924); G. Bonchev: Ancient mining in Bulgaria and Macedonia (1925) and The Kresovo region and its relation to geology (1936); D. Davies: Roman mines in Europe (1935), which contains many historical comments about Bulgaria; G.K. Georgiev: Iron industry in Pirin, Alibotoosh-Kita mountains and the neighbouring mountains (1938); G. Konjarov: Iron ore deposits in Bulgaria (1940).

The works published after the 1944 Revolution are as follows: G.K. Georgiev: (a) A second contribution to the study of iron industry in Alibotoosh and the neighbouring mountains (1946), (b) Iron industry in Karvancho (1953); G. Konjarov: A contribution to the history of mining and metallurgy in Bulgaria; G.K. Georgiev: (c) On the history of knowledge about rocks and the development of petrographical sciences.
History of Geology in Austria

Work on the history of geological sciences is only weakly developed in Austria. Austrian scholars have generally shown relatively little interest in the history of earth sciences and hardly any notice has been taken of works in this field. Even the lists of Austrian works on geology published by the Geologische Bundesanstalt every year have not helped to overcome this situation. The efforts made by Leopold Eber at the University of Vienna in the beginning of the fifties, which were aimed at stimulating research in the history of geological sciences in Austria, have unfortunately not been continued. Nevertheless, there are a number of minor activities related to the history of geology, particularly in connection with anniversaries of the birth or death of important scholars in this field.

Since 1945, major contributions to the history of geology in Austria have been made by Prof. Hämmerl (Vienna), Prof. Töllmann (Vienna), Prof. Flügel (Graz), Prof. Theil (Vienna) and Prof. Zapfe (Vienna). Prof. Zapfe is the author of the Index Fossilium Catalogorum Austriae (Fossillium Catalogus Austriae, vol. 15), which is also of importance for geology.

T. Cernajak has written a bibliography of Austrian scholars of earth sciences (18th - 20th centuries) which may serve as a reference book necessary for research in the history of geological sciences.

The following Austrian institutions are at least partly involved in works on the history of earth sciences:

1. Commission for the Compilation of an Austrian Biographical Lexicon of the Austrian Academy of Sciences (founded in 1946; head: Prof. Züllner). The lexicon compiled by this commission includes many biographies of coal and steel experts and scholars of earth sciences. Unfortunately the lexicon is incomplete due to lack of collaborators in the project.

2. Commission on the History of Natural Sciences, Medicine
3. Austrian Association of the History of Coal and Steel Industry (headquarters in Leoben). This association is currently engaged in the history of industry.

Unfortunately we have not succeeded in setting up a work group on the history of geology within the Austrian Geological Society (ÖGG), although many members expressed their interest in such a group. The idea did not materialize because all those interested seem to be under too great a strain with respect to their own professional tasks.

In 1981, the Austrian Geological Society remembered the geologist Ami Boué on the occasion of the 100th anniversary of his death. A commemorative speech was given by T. Cernajsek. An excursion to the surroundings of Völslau was also organized. On the occasion of the 150th anniversary of Eduard Sues' birth the Austrian Geological Society held a symposium and published a festschrift and a special volume.

In October 1983, the Austrian Geological Society held a meeting devoted to the 75th anniversary of its foundation which was combined with a commemorative exhibition in the Geologische Bundesanstalt.

That there is an interest in the history of geology in Austria can be seen from the growing number of publications in this field (1978: 3; 1979: 16; 1980: 25; 1981: 30; 1982: 23). This gives rise to the hope that the interest in the history of geology may even increase in the future.

Tillfried Cernajsek

History of Geology in Poland (1983)

In 1983 Polish members of INHIGEO continued their work on the history of geology which was mainly devoted to the development of geological sciences in Poland and in neighbouring countries.

Special mention should be made of A.K. Kleczkowski's work on the history of the foundation of the Mining Academy in Kielce (1816), which was supported by experts from Saxony. The monograph will be published in Travaux du Musée de la Terre. A book on Jan Czerek, a Polish explorer of Siberia in the second half on the 19th century, has been submitted to the publishers by Z. Wojcik. Several posthumous biographies have been prepared for print. Z. Wojcik wrote a biography of the late corresponding member of INHIGEO, Antoni Laszkiewicz, and Antoni Gawel and Wojciech Narebski of the late expert in salt mineralogy, Karol Procharzek, and the former secretary of the Polish Geological Society, Marie Langle (to be published in the Annals Soc. Geol. Polon., vol. 54, 3/4 (1983-84) and in Mineral. Polonica, vol. 14).

Historical lectures were delivered by members of INHIGEO at several scientific meetings. At a meeting held on the occasion of the 200th anniversary of the Jagellonian University of Cracow, Antoni Gawel and Stanisław Czarniecki gave lectures on the history of mineralogy and the history of geological sciences at this Department. Z. Wojcik lectured at a meeting in Zakopane (September 1983) which was held to remember the late speleologist and expert in the history of mining and metallurgy in the Tatra Mountains, Stefan Zwolinski (to be published in "Wiertica"). He was also the guide of an excursion organized in connection with this meeting. In October 1983, a meeting was held in Kielce which was devoted to the marbles of the Góry Świętokrzyskie (Holy Cross) Mountains. Among others, S. Czarniecki gave a lecture on a collection of marbles of the 19th century which was given to the Academy of Sciences in Cracow.
Z. Wojcik lectured on the history of the study of the geology of marble in this region.
At a symposium on the contribution of Gdańsk Pomorania to the development of science and education held in Gdańsk in November 1983, Z. Wojcik spoke about the history of natural sciences in Gdańsk in the 18th century, and Józef Babicki gave a lecture on the development of geography in this town. In his speech Z. Wojcik emphasized Polish-German scientific relations, especially with the universities of Königsberg, Frankfurt/Oder, Rostock and Berlin. The lectures are intended to be published.
The Group of Students on the History of Paleontology held a meeting devoted to the 50th anniversary of the death of the two outstanding Polish paleontologists Józef Bismiradzki and Tadeusz Wniesiowski. The former is the author of fundamental monographs on ammonites, whereas the latter wrote classical papers on micropaleontology and on the history of geological sciences. The lectures were given by W. Broch-Wicz-Lewinski, H. Tomczyk, J. Wierczok and Z. Wojcik.

It should also be mentioned that a special issue of the quarterly 'Journal of the History of Science and Technology' has come out (no. 1, 1983) which is devoted to A. de Cuvier and Ch. Darwin. Among others, J. Garbowska wrote an article on 'Theory of catastrophes on the background of geological conceptions at the end of the 19th and the beginning of the 20th centuries'..

W. Marebeka, Z. Wojcik

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History of Geology in China (1983)

The second national congress of the Chinese Society for the History of Science and Technology was held in Xi'an, Shaanxi Province, between October 28 and November 1, 1983. About 150 delegates from institutes, universities and colleges attended the meeting. A section dealing with the history of earth sciences, Li Brong, secretary-general of the HGGSC-Committee, and two other members participated in this section and delivered their papers.
The second symposium of the History Division of the Geological Society of China (HGGG) was held at Nanjing University, Nanjing (Nanking), between November 24 and 30, 1983. A total of 64 people, including 8 members of the HGGSC-Committee, participated in the meeting. At the opening session on November 24, Prof. Guo Lingzhi, President of Nanjing University, Prof. Muenshi, director of the Nanjing Paleontological Institute, Academia Sinica, and Prof. Zhou Taixin, President of the Jiangsu Geological Society, delivered short speeches and conveyed their congratulations to the second HGGSC-Symposium. 51 papers had been announced. 43 of them were presented and discussed in two divisions: one in the lecture hall of the university library, and the other in the Department of geology. As regards subject matters, the papers delivered fall into four main groups:

1. Studies on the knowledge of minerals, fossils, hydrogeology and ore prospecting etc. in ancient China.
2. History of petroleum geology in China.
3. Development of the theory of continental drift, plate tectonics and saltatory evolution etc.

It should be mentioned that one volume contains 17 papers which were presented at the second HGGSC-Symposium by scholars from the Department of Geology, Nanjing University.
On the suggestion of Huang Jiqing, President of the GSC, a special meeting was arranged on November 27 in order to discuss the preparation of a volume entitled "Chinese History of Geology". Xia Xiangrong took the chair. The majority of the participants were of the opinion that an editorial board should be set up so that a text book on the history of geology could be compiled and published in a short time.

On November 28 a field trip to Chihaishan was organized. The excursion familiarized the participants with the stratigraphy of Permocarboniferous limestones with strata-bound lead-zinc deposits. The geology of Chihaishan had been described by von Richthofen about 100 years ago and was then thoroughly studied by the, late professor J. S. Lee (Li Siguang) in the thirties.

The proceedings of the second HUGEO-Symposium will be published in the Department of Geology, Nanjing University, under the editorship of Prof. Zhang Zuhuan and his colleagues.

Xia Xiangrong

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XI th INHIEGO Symposium, Moscow, 1984

The international committee in charge of the programme held a meeting in Moscow between November 13 and 19, 1983. It selected the papers to be read at the 27th International Geological Congress and made a proposal for the programme. The XIth International INHIEGO Symposium "History of Mineralogy" will be held in Moscow between August 7 and 9, 1984. This symposium is, at the same time, registered as the international symposium "5. 21.2.1." of the 27th International Geological Congress. Members and corresponding members of INHIEGO have the opportunity of participating in this symposium under special conditions provided they are prepared to dispense with other sections and excursions of the 27th International Geological Congress (cf. Prof. Tikhomirov's letter of April 1983). 21 papers from 12 countries have been included in the programme so far. The following proposal for the programme has been made:

7.8.84, 15.00 - 16.00, Chairman: G.P. Barsanov (SU)
Hooykaas, R. (NL) - Opening address of the President of INHIEGO,

Gustau, M. (SBR) - The emergence of mineralogy as a scientific discipline in history.

Yushkin, N.P. (SU) - The history of mineralogy and the evolution of fundamental mineralogical ideas.

Bouillet, G., Cailloux, A. (FR) - Diversity of minerals on the Earth and the Moon.

Kazurov, E.K. (SU) - The development of gemmology Historical review.

7.8.84, 17.00 - 18.00, Chairman: G. Wang (China)
Durant, G.P., Rolfe, W.D.J., R. (Britain) - The mineral collection of William Hunter (1718-1783) as an illustration of early mineralogy.

Barsanov, G.P. (SU) - The establishment of alemismic V.L.
Vernadsky's mineralogical school in the Moscow University.

Torrens, H.S. (Britain) - J.B. Longaire (1786 - 1858) - an English practical mineralogist in Russia 1877 - 1822.

8-8, 15, 00 - 16, 20, Chairman: M. Guntar (GDR)

Hooykaas, R. (NL) - The historical, philosophical and scientific implications of the Hady's crystal theory.

Shafronovsky I.I. (SU) - Les grandes dates du développement de la cristallomorphologie mineralogique en URSS.

Nagy P. (HU) - Development of ideas on Symmetry in mineralogy and other sciences.


8-8, 17, 00 - 18, 00, Chairman: N.P. Yusokin (SU)

Wen G. (China) - Jade - The sign of ancient Chinese culture.

Melkumian A.M. (SU) - Osirian and transformation of its role in the history of the material culture.

Ginzburg D. (Israel) - The mineralogical identification of the Biblical saphir stone.

9-8, 15, 00 - 16, 40, Chairman: R. Hooykaas (NL)


Valiance T.G. (AU) - Sydney Earth and after: mineralogy of colonial Australia 1788 - 1901.

Stojnov S.Kh., Starikova L.V. (BUL) - The history of mineralogical studies in Bulgaria.

Gaikey G. (HU) - The history and development of mineralogy in Hungary till 1822.

Foka T. (HU) - Development of mineralogy in Hungary in the 19th century.

9-8, 84, 17, 00 - 17, 40, Chairman: E. Dudich (HU)


Langer W. (FRG) - Early studies in volcanic mineralogy and petrography in the Rhenish Slate Mountains (West Germany)

The meetings of the XIIth INHIGEO Symposium will be held in the afternoon.

Business meetings of INHIGEO (election, report on the work of INHIGEO 1980 - 84, further tasks of the Commission 1984 - 86, etc.) may be held on August 6 and 10, 1984, in the afternoon.

Two further meetings on the history of geology will be held within section 21 of the 27th International Congress. They have been organized separately from the XIIth INHIGEO Symposium.

C. 21.1. Development of concepts of the Earth's composition (lithology, mineralogy, petrography, geochemistry, mineral resources, hydrogeology, etc.)

14 papers by scholars from Australia, Czechoslovakia, the FRG, Hungary, the United States, Spain and the Soviet Union have been included in the programme so far, among them papers by T.G. Valiance, E. Dudich, Yu.M. Solovyev and J. Urban.

C. 21.1.2. Evolution of concepts of the dynamics and structure of the Earth's crust and upper mantle

16 papers by scholars from Canada, Czechoslovakia, France, Great Britain, Japan, the United States, Switzerland and the Soviet Union have been included in the programme, among them papers by P. Ellenberger, E.Z. Milanski, V.V. Tikhomirov and T. Watanabe.

The excursion on the history of geology in the Soviet Union, Exc. No. 099 A and C, Moscow - Leningrad - Petrozavodsk will be carried out as planned.
For further questions about the XIth IMAIGEO symposium "History of Mineralogy", the other meetings on the history of geology of the 27th International Geological Congress as well as the excursions on the history of geology contact please:
Prof. V.V. Tikhomirov, Geological Institute of the USSR Academy of Sciences, Fyzhevsky 7, Moscow 109 017, USSR.

- History of Geographical Thought

The 25th International Geographical Congress will be held between August 27 and 31, 1984. The committee organizing the Conference represents the five Alpine countries: Austria, France, the FRG, Italy and Switzerland. Symposium 27 will be held by the Commission "History of Geographical Thought". The following topics are included:

The image and role of geography in different countries - history and outlook
a. Biographies of outstanding scholars
b. Preoccupation with "dead-end" theories and methods
c. Competition and cross-fertilization with other disciplines

Symposium 27 will take place in Geneva (Switzerland). The number of people participating in the meeting is supposed to be 30. The conference fee is 245 Swiss franc. For further information contact Prof. Cl. Raffestin, Département de Géographie, Route des Acacias 18, 1227 Carouge, Geneva, Switzerland.

- A.E. Fersman's 100th birthday

The centenary of the birth of the Soviet mineralogist and geochemist Alexander Evgenievich Fersman (1883 - 1945) was commemorated in 1983. Several meetings were held to honour the memory of this scholar who made great contributions to various fields of earth sciences. The Division of Geology, Geochemistry and Geophysics of the USSR Academy of Sciences held a special meeting in Moscow on November 16, 1983. The four papers read at this meeting dealt with A.E. Fersman's ideas about mineralogy and their development, his contribution to modern geochemistry and cosmochemistry, his views about mineral genesis and his contribution to the development of mining industry on the Kola peninsula. On November 24, 1983, a second meeting in honour of A.E. Fersman was held at the Institute of the History of Natural Sciences and Technology of the USSR Academy of Sciences.
In the GDR, a colloquium was organized by the Society of Geological Sciences and the Ernst-Höritz-Arnold-University in Greifswald on October 27, 1983. The papers read and the films shown at this meeting paid tribute to Persman's life and his great scientific achievements. A small collection of minerals found in the Soviet Union was also shown in Greifswald. Persman had presented this collection to the Museum of Natural History of Humboldt University on the occasion of the German-Russian Week of Natural Scientists in Berlin in 1927.

Books with Persman's biography have been published in the Soviet Union and the GDR.

- History of the Evolution of Geological Knowledge in Venezuela

This is the title of a project carried out by the School of Geology at the Universidad Central de Venezuela. In connection with this, we would very much appreciate the cooperation of all readers on the following points:

1) Any biographical or bibliographical information about any of your national geoscientists who may have visited Venezuela in the 19th and 20th centuries up to 1940.

2) Information about mining enterprises carried out by your nations in Venezuela (gold, coal, oil, etc.)

3) Any further information available that may serve to continue the search for more details.

4) Names and addresses of persons, institutions, universities or companies that may keep files of related matters, so that we could write them directly

Please send any information to:
Prof. Dr. Franco Urbani
Apartado 47.028, Caracas 1041A, Venezuela

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Bibliography

Bibliography of publications on the history of geological sciences by members and corresponding members of NISGEOG (1982/83). The list only included those books and articles published in 1982 or 1983 that were mentioned to the secretary of the Commission in the annual reports of 1983.


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Appendix:


Annotations


The geological mapping of Ireland is a scientific achievement which was made by geologists of this country independent of the development in this field in England or Scotland during the 18th and 19th centuries. G.L.H. Davies in a convincing manner describes the history of geological thinking in Ireland using a lot of material from archives and libraries. He shows the close connection between the development of geological mapping in Ireland and geological thinking in general, and makes particular reference to the foundation and work of the Geological Survey of Ireland. Altogether, this well-written book gives an excellent insight into the history of geology in Ireland and pays due tribute to the work of several outstanding geologists, such as W.H. Baily, De la Beche, G.V. Du Noyer, P. Galley, A. Geikie, R. Griffith, E. Hall, H. James, J.B. Jukes, G.H. Kinahan, A. McHenry, R. Kurchison, Th. Oldham, J.M. Portlock and A.C. Ramsay. The book is a welcome additional contribution to the topic of the Xth INHIGEO symposium "Development of Geological Mapping in Connection with Progress in Geological Thinking" held in Budapest in 1982. Historians of geology will appreciate the "late" publication of Davies' book, for it contains not only valuable information about the history of mapping but also about the history of geology in Ireland which not many scholars have been familiar with so far.

M. Guntau
Photography was introduced into Earth scientific documentation already in its very beginnings, a period lasting about three decades (1839 – 1870). It is testified, that a daguerreotype of fossils was made in the spring of 1840. Steel-engravings after daguerreotypes were published in 1852. Since that time there have been papers containing platemounted copies of the negative-positive-process. A specification of the ascertained incunabula in the Earth scientific photographic illustration is given. Photomechanical printing methods, which were already known before 1870, increased in use after this year. The late 19th century, however, saw a renaissance of the original photographs, whose works illustrated with mounted paper copies are also listed. Preceding the photohistoric presentation, the author given a record of nature-printing, another but almost forgotten procedure for the true copy of Earth scientific objects.

F. Kirchheimer

Kharbin where he taught at a Polish school. This is the place where the author of this book met Grochowski. The monograph is based on his memoir and on more than 80 geological field books written by Grochowski which are kept in the Warsaw National Library. Some of his notes are likely to be published separately in Warsaw.

Z. Wojcik


A. Czaskanowski (1830 – 1876) did his geological studies in Siberia where he was staying in political exile. He gave a geological description of the Irkutsk region, which includes a map, and organised three expeditions to northern Siberia, including one to the Arctic Ocean. Some of Czaskanowski’s findings are even today stratigraphic key horizons. His collections are kept and investigated in the museums of Leningrad, London, etc. Czaskanowski was the first to determine the Jurassic age of coal-bearing beds in the environment of Irkutsk (since Humboldt considered to be of Carboniferous age).

The book deals with the activities of Czaskanowski and other Polish naturalists sent into Siberian exile after the 1863 insurrection. The author also gives an account of the achievements of Polish, Russian and German geologists who continued Czaskanowski’s work (e.g. J. Czerkwi, L. Jaczewski, K. Bohdanowicz, W.A. Obruchev and E. von Toll).

On the basis of documents available in archives, the author comes to the conclusion that Czaskanowski’s death was caused by internal infection (nephrite). He did not commit suicide as maintained by some other biographers.

W. Narebski

The book deals with the history of three Polish societies which were ideologically related to each other: the Society of the Museum of the Earth (1932–1946), the Polish Society of Lovers of Earth Sciences (1957–1972) and the Polish Society of Friends of Earth Sciences (existing since 1972).

The principal aims of these societies were as follows: popularization of geology, protection of nature (later of natural environment), and stimulation of studies on subjects considered to be of secondary importance by scientists of higher schools and institutes. One of their activities consisted in collecting and elaborating material on the history of geological sciences in Poland as well as in keeping and studying palaeontological and mineralogical collections. Due to the efforts of the first Society, the Museum of the Earth was founded in Warsaw in 1946 as the main geological museum in Poland. The Polish Society of Lovers of Earth Sciences had gathered both professionals and amateurs tending to support the Museum of the Earth in its activities and in protecting regional geological museums in our country. The Polish Society of Friends of Earth Sciences enlarged this programme of activities by doing large-scale scientific studies, predominantly in the field of the protection of natural environment, speleology, scientific expeditions, etc. In addition to that it stimulated the widespread and popular movement of collecting mineralogical specimens. Every year the Society organizes an exchange market of mineralogical specimens visited by collectors from Poland and abroad, above all from similar organisations in the GDR and Czechoslovakia.

It should be pointed out that the book also contains some important documents on the history of the societies which played an important role in popularizing earth sciences in Poland.

W. Srebak


All members and corresponding members of LHIGEO are much indebted to Dr. H. Torrens for the compilation of this valuable Directory, prepared on behalf of the History of the Geological Sciences Subcommittee of the Royal Society’s British National Committee for Geology. On 32 large pages it contains, in alphabetical order, altogether 86 names (with addresses) of British scientists active in the field of the history of geological sciences. (For me personally it was a very pleasant surprise to learn that so many British colleagues are interested in this topic.) For each of them the particular field(s) of interest and the research in progress are indicated, and a relevant bibliography has been added.

This Directory is very useful indeed for everybody looking for contact with people of common interest, and especially in finding papers published in less widely known periodicals.

It would be highly desirable to have similar directories of other countries as well.

E. Dudich


The annals of the Section on the History of Geology of the Hungarian Geological Society start with a review of the year 1978 given by G. Csíky. The contributions following are devoted to jubilees and are mainly of a biographical character. They are, however, not only devoted to outstanding scholars of geological sciences, such as Ferenc Nopcsa and Vilmos
geological ideas in France and other countries, such as Britain, Germany, Hungary or Australia, are taken into consideration and skilfully presented in this well-prepared edition. It shows the achievements of French geology which so far have not been presented in a systematic way from a historical point of view.

M. Guntau


This volume contains a number of short essays on the life and scientific as well as social work of important Russian geologists who worked within the first state-run Russian geological institution during the first 100 years of its existence. The essays deal with the scientific and administrative work of two founders of the Geological Committee, V.G. Erofejev and S.N. Nikitin, and with the contribution of the Committee to the development of geology and the emergence of new geological disciplines. Particular mention is made of the main ideas of the scientific schools of A.A. Edelstein, A.N. Rjabinin, S.P. Maljevkin, A.N. Zaveritskij, Ju.A. Zemczukov, S.S. Smirnov, P.M. Tatarinov and Ju.A. Bilibin. The book also contains a great number of hitherto unknown photographs.

V.V. Tikhomirov


This book deals with the life and work of the talented Soviet scholar and corresponding member of the USSR Academy of Sciences G.N. Kamenskij, an outstanding pedagogue, author of important monographs and textbooks and one of the founders of the Soviet hydrogeological school. Particular attention is paid to his works on the basic laws underlying the distribution, genesis and conditions of formation of under-
ground waters, to his works on the development of engineering geology as well as to his contribution to the methodology of hydrogeological research. The book includes basic facts about O.V. Kamenetskij's life and work, a chronological bibliography of his publications and of books about the scholar.

V.V. Tikhomirov


This book appeared as issue 51 of the series "Outstanding scholars of the University of Moscow" and is devoted to the scientific, educational and administrative work of the prominent Soviet geologist Oktavij Konstantinovič Lenge. His extensive studies in the fields of hydrogeology and engineering geology were closely connected with the establishment of scientific schools and disciplines in the Middle Asian Republics.

The book is very well illustrated and contains a lot of informative material.

V.V. Tikhomirov


For subscription contact Ellis L. Yochelson, Secretary HESS, Room E - 501, Museum of Natural History, Washington, D.C. 20560, USA

In addition to the "Essays on the History of Geological Knowledge" (in Russian, Vol. 21, 1981), which have been published in Moscow since 1953, "Earth Sciences History" now represents a second independent series on the history of earth sciences, a fact which can only find our general approval.

The first volume of this new series was edited by Kenneth B. Bork. The articles deal with methodological questions of geological thinking, the history of paleontology, and several interesting questions about the history of geology in the United States in the 19th century. Particular mention should be made of the articles by D.B. Kitts "The Logic of Discovery in Geology" and by R. Lauden "Tensions in the Concept of Geology: Natural History or Natural Philosophy?". They both take up and discuss basic questions about the history of geological thinking. W.L. Aldrich's article "Women in Paleontology in the United States 1840 - 1960" is not just a matter of courtesy. It appreciates the scientific work of those women who have rendered outstanding services to the history of geology.

The second volume is dedicated to George W. White who has made a great contribution to the historiography of the United States and of other countries. The articles deal with questions of the history of geology of the 17th and 18th centuries. J.R. Force discusses geological speculations of some Newtonians. Robert Hooke's article deals with ideas about the Earth in the 17th century. M. Carozzi touches upon reactions to the Lisbon earthquake (1755) in the British colonies and in Europe. Of particular interest is A.V. Carozzi's article about Heinrich Wettstein (1831-1899) whom A. Wegener described as one of the first scholars who brought up the idea of the continental drift. Other articles, for example, deal with seismometry in California in the 19th century, the discovery of middle ordovician vertebrates by C.D. Walcott (1890) and lectures on geology and paleontology delivered by Louis Agassiz (1867-1873).

The articles lay particular emphasis on fundamental statements, touch upon interesting topics and are highly informative. Both volumes include a considerable number of reviews of books on the history of geology, information about the international organization HESS and a calendar of scientific meetings on the history of geological sciences. It is to be hoped that the first volumes of this excellent new series will find a broad readership. And yet one cannot overlook the fact that the topics of the articles are con-
centrated on the history of geology in the United States and other Anglo-Saxon areas. Since HESS is an international organization, it would be a good idea if this fact was more adequately reflected in the make-up of "Earth Sciences History". This, of course, would require to get authors from other countries as well.

M. Guntau

K. Hölder (Ed.): Regionale Einflüsse auf Ursprung und Entwicklung geologischer Theorien. VIIIth INHIGEO Symposium, Münster-Bonn, September 1978 (FRG), Münstersche Forschungen zur Geologie und Paläontologie, Heft 58, 123 pp., 5 ill., Münster 1983 (in German).

This volume contains the most important contributions to the VIIIth INHIGEO symposium as well as the summaries of the remaining papers, both of which have been published elsewhere before. Also included are the basic statements of those papers relevant to the general topic of the symposium. In a convincing way, F. Ellenberger points out how the geological environment influences human thinking, "either by being conducive to the way of thinking or by being a hindrance to its advancement, thus inflicting short-sightedness on the mind's eye." (p. 27). The author deals with two schools in 18th-century France "which differed according to the places where their adherents lived, viz. in the north or south of France." (p. 29). H. Hölder, E.E. Milanovsky, M. Schwarzbach and V.V. Tikhomirov also discuss interesting aspects of the relationship between certain geological regions and the formation of geological theories. A.M. Osepot, on the other hand, has "serious doubts about regional influences on the origin and development of geological ideas" (p. 86), which he manages to prove with a number of examples from the history of science. Altogether, this volume gives a good insight into the different views about the topic of the symposium. It shows that the lively discussion of a scientific meeting can be adequately presented in a publication of limited size.

M. Guntau

M. Neumann van Padang; History of the Volcanology in the former Netherlands East Indies. 76 pp., 25 figs., 4 pls.; enclosure. Leiden 1983 (Scripta Geologica of Rijksmuseum Geologie en Mineralogie).

After a list of active volcanoes of the region (pp. 3-6) follows the description of the volcanoes in the order of their becoming-known by publication: 1°, in old Javanese sources and travel accounts of the 16th-18th centuries, 2° scientific reports of the 19th century, 3° organised volcanological research in the 20th century. In this last part also special topics are discussed: the Volcanological Survey, the Krakatau, temperatures in the crater region, the caldeira problem, etc. Each chapter begins with scientists who carried out volcanological research. The work ends with an extensive bibliography (ca 300 titles). The plates show 8 coloured pictures; two of them are reproductions of paintings by the Javanese artist and geological assistant Raden Saleh.

In his foreword the author relates how this monograph has been written at the request of the Commission on the History of Geological Sciences of the Royal Netherlands Academy of Sciences, instituted after the participation of Mienwijkamp and Hooykaas in the Congress of History of Geol. Sciences in Yerevan (1967), and that this work is a contribution to the "History of Geology of the Netherlands and their former Overseas Territories" planned by that Commission.

It is gratifying that the author, who has had a large share in volcanological research in this region (38 items in the bibliography are his), sees at least part of the work he prepared for the Commission published in such an excellent way.

R. Hooykaas
From the point of view of science history, the author analyzes several questions of the development of science, such as the role of particular scholars, disciplines, journals and research programmes in the course of history. He also touches upon the emergence of new disciplines and discusses this question with respect to geophysics and meteorology. Of particular interest is the fact that Schröder takes the social character of the scientific process of cognition into account (p. 68). According to him, the genesis of new disciplines is not solely connected with the formation of particular institutions (organisations and observatories) (p. 74). He expressly emphasizes practical demands in connection with the emergence of new disciplines (p. 58f., p. 76f.). In this way reference is made to the essential aspects of this process in the history of science. Schröder’s book touches upon many current problems and provides valuable stimuli. The bibliography includes a great number of interesting publications.

The book will certainly not only stimulate further work on the history of the physics of the Earth. Historians of other disciplines will undoubtedly also gain a great deal from this book.

M. Guiteau


The three chapters of this book deal with the historical development of the Geological Society of China (GSC) from its foundation in 1922 up to 1981. Starting with a short review of the early stage of geological work in China after the revolution of 1911, the book then gives a thorough account of the foundation of the GSC in 1922. The history of the Society can be divided into two periods:

1) Initial and mature period (1922-1951);
2) Period of reforming and great development (1952-1981)

The aim, task, structure and function of the Society in these two periods are described with reference to a series of past constitutions of the GSC.

Based on the proceedings of all previous annual meetings, including special symposium and other kinds of material, the book gives a detailed chronological survey of the scientific activities of the GSC at home and abroad (pp. 55-213).

The book contains five appendices of historical significance.

Xia Xiangrong

- M. Carozzi: Voltaire's Attitude toward Geology - Extrait des "Archives des Sciences", vol. 36, Fasc. 1, 1983, éditées par la Société de Physique et d'Histoire naturelle. Geneva 1983, 146 pp., 6 fig. (in English)

Voltaire, who played an outstanding role among the thinkers of the Enlightenment in the 18th century, among other things also devoted himself to geological studies. Although this fact has been generally known for a long time, Voltaire's work in this field has not been analysed so far. The present study is an attempt to fill this gap. The author first discusses some fundamental geological ideas of the 18th century, such as the coming into existence of fossils and the formation of mountains. Taking present-day research results into account, she presents Voltaire's views about these and other questions. Voltaire, for example, rejected diluvianistic interpretations of the genesis of fossils and tried to explain this phenomenon from his own point of view; his ideas on this issue did, however, not directly influence geological thinking at that time. It seems to be of particular importance that Voltaire's philosophical beliefs and the
conclusions he drew from direct observation of nature were the main reasons for his criticism of religiously-based diluvianism. At that time, philosophical thinking and
cognition of nature were more closely related to each other
than, for example, in the present. During Voltaire's life-
time geology was still in its early stages and using concrete
facts for theoretical generalization was only weakly develop-
ed.
The author above all discusses his "Dissertation sur les
changements arrivés dans notre globe et sur les
pétrifications qu'on prétend en être encore les témoignages"
(1746) and "Les Singularités de la nature" (1768).
The present study is an exceptionally stimulating publication,
and it is to be hoped that it will find a broad readership.
Those who intend to deal with the history of geological
knowledge in the 18th century should not leave this book
out of consideration.

M. Gontau