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INTERNATIONAL COMMISSION ON THE HISTORY
OF GEOLOGICAL SCIENCES
INTERNATIONALE KOMMISSION FÜR GESCHICHTE
DER GEOLOGISCHEN WISSENSCHAFTEN



NEWSLETTER 16
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ROSTOCK (DDR) 1982

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

INTERNATIONALE 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)

Newsletter No 16
Informationsbrief Nr. 16

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Dear colleagues,

Thanks to the active assistance of many colleagues from several countries we have been able to provide an increasing amount of information in our INHIGEO Newsletters, thus making them more and more attractive to a growing number of people. We should like to thank all those who have supported our work in the form of reports, annotations, information or simply proposals.

As a result, the size of the Newsletter has also increased continuously. The GDR Academy of Sciences has made available considerable resources each year to cover the rising expenses for printing and mailing the Newsletter.

According to tradition, the Newsletter has been published in two languages so far: the first 10 issues in English and Russian, issues 11 - 15 in English and German. In order to retain the Newsletter as an effective means of communication between all those interested in the history of geological sciences, at the same time considering the increasing amount of information and the rising cost of production, the Newsletter will be published in English only from now on, starting with issue 16. This will make it possible to save considerable funds without impairing the purpose of the Newsletter. We hope that our readers who have preferred German so far will show understanding for this change.

We should be very grateful to you if you continued to support our work with the Newsletter by sending short reports, information, comments and proposals.

Martin Guntau

Liebe Kollegen,

durch die aktive Mitarbeit zahlreicher Kollegen aus verschiedenen Ländern sind die Newsletter der INHIGEO-Kommission reicher an Informationen geworden und finden in immer weiteren Kreisen Aufmerksamkeit. Ausdrücklich soll allen Kollegen gedankt werden, die durch eigene Beiträge, Annotationen, Informationen oder auch nur einfache Vorschläge die Gestaltung der Newsletter so wirksam unterstützt haben.

Auch der Umfang der Newsletter ist angewachsen, und die Akademie der Wissenschaften der DDR hat jährlich dankenswerterweise erhebliche Mittel zur Verfügung gestellt, um die gewachsenen Kosten für den Druck und den Versand zu decken.

Traditionsgemäß erschien der Newsletter bisher zweisprachig; die ersten 10 Hefte in englischer und russischer, die Hefte 11 bis 15 in englischer und deutscher Sprache. In Anbetracht des wachsenden Umfangs an Informationen ist der Preis für die Herstellung des Newsletters stark angestiegen. Um in dieser Situation seine Wirksamkeit als Mittel der Kommunikation zwischen den Interessenten an der Geschichte der geologischen Wissenschaften in vielen Ländern der Erde zu erhalten, wird der Newsletter ab No 16 nur noch in englischer Sprache erscheinen. Dadurch werden erhebliche materielle Mittel eingespart, ohne den eigentlichen Zweck des Newsletters zu beeinträchtigen. Wir bitten unsere Leser, die bisher die deutsche Sprache bevorzugten, für diese Änderung um Verständnis.

Sehr dankbar wären wir Ihnen, wenn Sie die Gestaltung des Newsletters auch weiterhin durch Kurzbeiträge, Informationen, Hinweise und Vorschläge unterstützen wollten.

Martin Guntau

R E P O R T
on the Xth Symposium of INHIGEO Budapest, Hungary
16-23 August 1982

The INHIGEO Board brought up the idea of choosing the "Development of Geological Mapping in Connection with Progress in Geological Thinking" as the topic of the Xth Symposium (1982) as early as September 1978 (at the brilliant VIIIth Symposium, Münster-Bonn, FRG). Hungary was honoured by the offer to organize the meeting in Budapest. From the Hungarian side, the invitation was officially forwarded at the IXth Symposium of INHIGEO, July 1980, in Paris (associated to the 26th International Geological Congress).

The local organizing institutions were the Hungarian Academy of Sciences, the Hungarian Geological Society, the Central Office of Geology, the Hungarian Geological Institute and the L. Eötvös University, Budapest. The INHIGEO Board was most helpful during the preparatory stage and even succeeded in procuring very considerable financial support from IUHPS.

The First Circular (January 1981) was answered by 118 people from 17 countries of 4 continents. A total of 71 contributions had been announced. No application was rejected. Altogether 60 abstracts arrived to be included in the 103-page volume of ABSTRACTS printed by the Hungarian Geological Institute. However, most probably due to the world-wide economic recession which had brought about several financial restriction in many countries, the number of definitely registered participants dropped to 76, from 13 countries. (Austria, Bulgaria, Czechoslovakia, China, France, FRG, GDR, Great Britain, Greece, Hungary, Israel, the Netherlands, USSR). It is highly regrettable that nobody had come from overseas.

On the sunny and warm days of 16-18 August, 47 papers were presented (15-20 minutes each) and discussed in the House of Techniques in Budapest (next to the Parliament Building on

the left bank of the Danube). Thematically they fall into four groups:

1. General trends in the development of geological mapping, from the early beginnings (e.g. antique Greece) to cosmogeology (comparative geological mapping of the planets and their moons).
2. Historical stages of the geological mapping of different regions and/or countries (e.g. Austria, Carpathian Basin, China, Czechoslovakia, Siberia).
3. Evolution of specialized map types of geological content (e.g. tectonics, geophysics, hydrogeology, geology applied to the exploration and prediction of oil and gas, bauxite, coal etc. deposits, engineering geology, geocryology).
4. Individual achievements of great scientists in the field of geological mapping (e.g. J. Philips, A.G. Werner, H. Abich, D.V. Golubyatnikov, R. Townsons a.o.).

Most lectures were delivered in English or Russian, few in German, some in French. No translation was provided, but during the discussions, if necessary, interpreters facilitated mutual understanding.

In the same building, one floor higher, an exhibition of geological maps was organized. Hungary presented old and new geological maps of Hungary as a whole, of some regions of the country, several mineral deposit prediction maps, engineering geological and hydrogeological atlases (from the Map Depository of the Hungarian Geological Institute). The USSR exhibited an interesting series of thickness maps (Precambrian and Paleozoic formations). The FRG displayed maps of various countries. Precious maps and sections from the 18th century exhibited by participants from Great Britain were particularly appreciated by the visitors. The scientific session and the exhibition received considerable coverage in several Budapest newspapers, and three

interviews were broadcasted by Radio Budapest (one of them with Professor R. Hooykaas, President of INHIGEO, in German, the other two in Hungarian).

A self-service restaurant and two refreshment rooms in the same building contributed to the comfort of the participants. An evening reception of relaxed atmosphere promoted human contacts.

The morning of August 19 was dedicated to the celebration of the Centennial Jubilee of the Paleontological Department of Budapest University (as a facultative item in the programme). After one hour of commemorating and historical discourses, interpreted into English, the participants were free to have a look at the exhibition showing the past of the Department, from its first professor, M. Hantken, up to the present day. In the afternoon, the Board of INHIGEO held a closed session followed by an open one. The names of the newly elected corresponding members were announced and problems of the next (Xith) INHIGEO Symposium (Moscow 1984) were discussed.

On August 20 and 21-22 field trips were organized (an English and a Russian language bus carried altogether almost 60 participants). The one-day Excursion A familiarized the participants with the Danube Bend, while the two-day Excursion B took the participants to the Transdanubian Central Range and the Lake Balaton area. Apart from numerous sites of cultural interest and scenic beauty, the highlights of the trip were the Zsigmondy memorial museum at Visegrád, the protected site of prehistoric man at Vértesszőlös, the geological nature conservation sites at Tata, Gánt, Várpalota, Sümeg, and the grave of the "greatest Hungarian geologist", L. Lóczy Sr. at Balatonarács. A Field Guide issued by the Hungarian Geological Society in English was handed over to all participants.

The Local Organizing Committee acknowledges with sincere gratitude every kind of help and support it received, as

well as the activity, kindness and cooperation of the participants. We hope they will retain a lasting and good memory of Hungary. We shall be glad to see them again at the next Symposium in 1984. By that time we shall probably be able to distribute the printed Proceedings of the Xth (Budapest) Symposium (to be published by the Hungarian Academy of sciences).

E. Dudich
Member of INHIGEO

New Corresponding Members of INHIGEO

(elected in Budapest August 19th, 1982)

Jurij Alexandrovič Anisimov (approved by the USSR National Committee of Geology), born in 1918; graduate of the Faculty of Geological Investigation of the Leningrad Mining Institute (1948); candidate's degree on the history of technology at the Leningrad Advanced Technical College (1951); research assistant at the Department of the History of Natural Sciences and Technology, Institute of History, Ukrainian Academy of Sciences (Kiev), where he has been head of the Department of the History of Technology for more than 20 years. Works on the history of the investigation of mineral resources in the Ukraine, esp. iron ore deposits; more than 100 publications, about 40 of them on the history of geological sciences, among them books on the history of geological investigation of the Ukraine, biographies of the geologists L.I. Lutugin, F.N. Černysev and A.O. Mikhalskij, and a history of the iron ore deposits of Krivoj Rog. Prof. Dr. Ju.A. Anisimov, Institut Istorii AN USSR, Sektor istorii estestvoznaniija i tehniki, GSP ul. Kirova 4, 252601 Kiev - I, USSR.

Tillfried Cernajsek (approved by the Austrian National Committee of Geology), born in 1943; study of geology and paleontology at Vienna University (1964 - 1971); assistant at the University of Salzburg (1969); Ph.D. 1971; since 1972 research assistant at the Geologische Bundesanstalt, Vienna (tertiary geology, micropaleontology, library work); 1979 appointment as Head of the Department 'Library and Publication' of the Geologische Bundesanstalt, Vienna. Member of several Austrian scientific societies, e.g. Geological and Paleontological Societies, member of the Union of Librarians and the "Österreichische Gesellschaft für Geschichte der Naturwissenschaften" (foundation member). Various publications on topics of earth sciences (ostracodes, stratigraphy), library affairs and the history of sciences; collaborator on the Austrian Biographical Encyclopaedia; work on the Bibliography of Austrian Scholars of Earth Sciences of the 18th, 19th, and 20th Centuries Including Those Working on Austrian Areas.

Dr. Tillfried Cernajsek, Geologische Bundesanstalt, Rasumofskygasse 23, A - 1031 Wien, Postfach 154, Austria

Viktor Efimovič Chain (approved by the USSR National Committee of Geology), born in 1914. Graduate of the Industrial Institute of Baku (1935); doctor's degree on geological and mineralogical sciences; corresponding member of the USSR Academy of Sciences since 1966; full professor at the Geological Faculty of Moscow University. More than 200 publications on regional geology, tectonics, petroleum geology and the history and methodology of geological sciences among them about 20 books; head of a project engaged in the production of international geological maps; honorary doctor of the University of Paris and honorary member of the Geological Societies of Bulgaria and France. Joint publication with V.V. Tikhomirov of the "Outline of the History of Geology" (1956); many of his articles are devoted to problems con-

cerning the historical and current development of geology.
Prof. Dr. V.E. Chain, Department of Geology, Moscow State University, Moscow 117 234, USSR

Leonid Arkadevič Goldenberg (approved by the USSR National Committee of Geology), born in 1920; studied at the State Moscow Archives Institute; candidate's degree on historical sciences (1958); doctor's degree on historical sciences (1968); Head of the Department of Scientific and Technical Information, Institute of Foreign Geology, USSR Ministry of Geology, since 1956. Scientific works on the history of geological sciences, esp. on the geology and cartography of the XVIIth and XVIIIth centuries (history of geological mapping and regional geological research); compilation of an information system of geology and exploitable mineral resources of various countries; active participation in the Polish-Soviet and GDR-Soviet symposia on the history of geological sciences; about 20 publications on the history of geology, among them some books, e.g. on M.F. Sojmonov.
Dr. L.A. Goldenberg, ul. Dimitrova 7, VNII Zarubežgeologija, 109 180 Moskva, USSR

Josef Haubelt (approved by the Czech National Committee of the History of Science), born in 1932; study of history at the University of Prague (1952 - 1957); assistant and senior assistant at the Institute of History, University of Prague (1959 - 1966); Ph.D. 1966; study and research visit to the Karl Sudhoff Institute, University of Leipzig / GDR (1967/68); study and research visit to the Institute of the History of Natural Sciences, Frankfurt University / FRG (1968/69); Habilitation 1972; award of degree; senior lecturer for history, University of Prague (1979). Member of the editorial staff of the Czech journal "History of Science and Technology" (DVT) and of other historically oriented periodicals; since 1965 member of the committee of the Czech Society of the History

of Sciences and Technology. About 30 publications on the history of sciences, above all on the geological works of Ignatz Born, Giov. Ant. Scopoli, Feithner, Goethe and others, and on the beginnings of the society of the science of mining; main areas of his publications are subjects dealing with the 18th century.

Doz. Dr. Josef Haubelt, CSc., Švojšovická 10/2834, 141 00 Praha 4, Spořilov II, CSSR

Martin Schwarzbach (approved by the IUGS National Committee of the Federal Republic of Germany), born in 1907; study of astronomy and geology in Heidelberg, Jena, Tübingen and Breslau (1928 - 1933); Ph.D. 1933; Habilitation 1938; 1933 - 1945 assistant at the Institute of Geology, University of Breslau; 1946 - 47 assistant and associate professor, University of Göttingen; since 1947 full professor of geology and Head of the Institute of Geology, University of Cologne; 1959/61 Dean of the Faculty of Sciences, University of Cologne; retired in 1975. Co-editor of several scientific journals, e.g. "Eiszeitalter der Gegenwart", "Paläogeographie", "Neues Jahrbuch für Geologie und Paläontologie", etc.; 1959 - 1961 chairman of the "Deutsche Quartärvereinigung", since 1980 consultant of the Geological Union at the Geological Archives, Freiburg i. Br. Main field of research; paleoclimatology; numerous publications on the history of geology, among them several books, e.g. "Berühmte Stätten geologischer Forschung", Stuttgart 1970, second edition 1981 (also translated into Russian), "Die geographische Herleitung stratigraphischer Namen", Cologne 1975, "Europäische Stätten geologischer Forschung", Stuttgart 1976, "Alfred Wegener und die Drift der Kontinente", Stuttgart 1980 and "Auf den Spuren unserer Naturforscher. Denkmäler und Gedenktafeln", Stuttgart 1981.

Prof. Dr. Martin Schwarzbach, Vinzenz-Pallotti-Straße 26, D - 506 Bensberg bei Köln, FRG

Jurij Jakovlevič Solovjev (approved by the USSR National Committee of Geology), born in 1931; studied at the Geological Faculty of Moscow University until 1955; since 1955 research assistant at the Department of the History of Geology, Institute of Geology, USSR Academy of Sciences, Moscow; candidate's degree on geological and mineralogical sciences (1964). Secretary of the Commission on Geological Investigation of the USSR (1955 - 1958); since 1957 member of the USSR Union of Historians of Natural Sciences and Technology; Director of the Library of Geological Writings of the USSR Academy of Sciences (1970 - 1975). More than 50 publications on various questions concerning the history and methodology of geological sciences, among them a book entitled "The Origin and Development of Paleogeography in Russia" (1966) and three more monographs.

Dr. Ju.Ja. Solovjev, Geologičeskij institut akademii nauk SSSR, Pyževskij per., d. 7, 109 017 Moskva Z - 17, USSR

Alexander Tollmann (approved by the Austrian National Committee of Geology), born in 1928; teaching diploma examination in biology and geography at Vienna University (1951); study of geology and paleontology at Vienna University; Ph.D. 1955; Habilitation (geology) 1962; since 1953 assistant at the Institute of Geology, University of Vienna; associate professor 1970; full professor and Head of the Institute of Geology, Vienna University, 1972. Chairman of the Austrian National Committee of Geology; member of the Committee of the Austrian Geological Society; corresponding member of the Academy of Sciences, the Geologische Bundesanstalt and other scientific bodies and organisations. Many tectonic, stratigraphic, facies, and micropaleontological studies on the geology of the Alps; numerous activities on the history of geology; publications on the geological research history in Austria, works in honour of important geologists, such as Ed. Suess, A. Boue, and others; setting up

of an archive of geological documents and museum holdings in Vienna (manuscripts, picture, obituaries, photographs, equipment, etc.).

Prof. Dr. Alexander Tollmann, Geologisches Institut der Universität Wien, Universitätsstr. 7, A - 1010 Wien, Austria

History of Geology in Italy (1970 - 1981)

After a period of less extensive work, activities have been intensified in the last decade.

Exhibitions were organized in several parts of Italy.

Special mention should be made of the exhibition of Bolca fossil fish quarry (Eocene remains; studied and quarried since 1600), which was organized on the occasion of the 26th International Geological Congress in Paris, and the general exhibition of Italian fossil vertebrates in Verona (Museo Civico di Storia Naturale). An exhibition of historical pieces of Renaissance geology and paleontology was organized by the University of Rome.

A symposium on Spallanzani was held in Modena. G.C. Parea and N. Morello drew special attention to his activities as a geologist.

The 100th anniversary of Darwin's death was remembered at the Accademia Nazionale dei Lincei. P. Leonardi spoke about Darwin's achievements as a geologist.

The 100th anniversary of the foundation of the Società Geologica Italiana (founded in 1882) was celebrated in this year. The commemoration congress took place in Bologna in September. A. Desio reported on the scientific achievements of Italian geologists abroad, E. Accordi on the most important geologists between 1200 and 1800, Gb. Dal Piaz on the development of scientific ideas about Alpine overthrusts from 1860 to about 1930, and G. Merla on geological

studies of the Appennines in the same period.

In Rome, B. Accordi delivered a series of lectures on "Lapidarii" from Antiquity to the Renaissance. He is also co-organizer of an exhibition of the geology and archeology of underground Rome since Etruscan times.

Several papers and books on the history of earth sciences were published by Annoscia, Malaroda, Morello, Petronio & Bippo, Piccoli, Pinna, Rossi and Sorbini. In particular, Accordi and Tagliaferro dealt with the classification of rocks in the 16th century, Accordi with museums of the 16th and 17th centuries, and Morello with the mining industry in Agricola's time.

A translation with comments of Cardono's "De Lapidibus" was published by Accordi, Stacchiotti and Tagliaferro; Franchini and Zanca described the geology at the Gonzaga Court in Mantova; Ligabue commented on the paleontological date in Leonardo's Codices; Leonardi published a newly discovered letter by Arduino.

The descriptions of some mollusca from Pliny to Linnaeus were commented on by Caprotti, Accordi, Ghisotti, Ippolito and Montalenti gave an account of the lives and works of Aldrovendi, Boccone, De Lorenzo, Imperato, Mercati, Renier and Scilla. In the Enciclopedia della Scienza e della Tecnica, Biografie, Mondadori (Milan, 1974 - 76) G. Piccoli gave an outline of the lives and works of the following scholars: Argand, H. Cloos, Du Toit, Eskola, Abich, Ameghino, Arduino, Barrande, Barrois, Beaufort, Bertrand, Beyrich, Boué, Boule, Breislak, Brocchi, Brongniart, von Buch, Chamberlin, von Charpentier, G. Dal Piaz, Daly, De Geer, De Marchi, Dutton, Elie de Beaumont, Franchi, Fuchsels, Gastaldi, Gaudry, Geikie, Gressly, Guettard, von Gümbel, Hall, Heim, Hutton, Lacroix, Lapworth, Lehmann, Logan, Lugeon, Lyell, G. Marinelli, O. Marinelli, Marzani-Pencati, Moro, Mrázek, Murchison, Novarese, d'Orbigny, Palissy,

Penck, Poulett-Scrope, Prévost, von Richthofen, Romé de l'Isle, Sacco, Scheuchzer, Sederholm, Sedgwick, Smith, Stoppani, Suess, Taramelli, Termier, Walcott, Woodward, and von Zittel.

B. Accordi

The French Committee on the History of Geology

The Comité français d'Histoire de la Géologie (COFRHIGEO) was founded in 1976. Since then, it has worked actively along two lines : 1) regular scientific meetings, three times a year, the proceedings of which are sent to all members; - 2) occasional support of specific activities outside COFRHIGEO.

1) Regular activities of COFRHIGEO

The Committee is an independent self-governing body affiliated to the French National Committee of Geology. Membership is not limited. Every person interested in the history of earth sciences may join the Committee, whether living in France or abroad. COFRHIGEO has already enlisted some distinguished foreign authorities.

The regular meetings are held in the Maison de la Géologie Lecture Hall (77 rue Claude Bernard, Paris V), from 2 to 5 p.m. Usually three lectures are held followed by open discussions, the topics ranging from early to more recent historical developments in earth sciences, including also some epistemological debates. Up to now, 45 papers summing up (or sometimes extending) the oral contributions have been issued and sent to the members of the Committee. About 150 copies are produced in a typed form. A sufficient number of copies is sent to some official bodies, thus ensuring the regular recording of the papers, all original. For example, a complete collection of all articles (entitled "Travaux du Comité français d'Histoire de la Géologie")

was handed over to the Bureau of INHIGEO during the Budapest meeting in August 1982. The volume comprises almost 300 pages.

It is, of course, regrettable that such an important material cannot, at the moment, be made available to a larger readership. Considering the number of members (100) and the annual membership due (currently 60 French francs), it is impossible to publish a proper journal at the moment. The authors are asked to get their contributions published in existing bulletins (COFRHIGEO lives entirely on its own budget).

The principal aim in founding our committee was to incite people in France (many geologists, assisted by some specialized professional historians) to take a greater interest in the extremely rich history of francophone earth sciences, which has been unsufficiently studied so far - not excluding, of course, foreign developments. We think that our project is developing successfully. Active support from all non-French persons involved in such studies is both an enrichment and an encouragement for COFRHIGEO. Therefore, they are welcome to join COFRHIGEO and, in case there is an opportunity, to make offers for lectures.

2) Support of specific activities

a) The 1980 Paris meeting. - We should like to draw attention to the fact that COFRHIGEO took an active part in preparing and holding the sessions devoted to the History of Geology, both those of Section 19 of the activities of the 26th International Geological Congress as well as those organized for INHIGEO members only. COFRHIGEO (in cooperation with the French Committee in the History and Philosophy of Science) was glad to offer a friendly reception to all participants. - COFRHIGEO also offered a large set of extra documents to the participants of the great nine-day historical excursion across France ("A 138") (the first of its

kind, ranking among the official Congress excursions.

b) The A 138 excursion guide-book. The excursion mentioned above was entitled "To the sources of French Geology". Starting from Paris and ending in Marseille, the carefully chosen itinerary, thoroughly studied beforehand, covered a number of crucial topics, e.g.: the Arcy-sur-Cure cave and the beginnings of speleology; Buffon, influences of his familiar landscape on his theories; the real story of the discovery of the Auvergne volcanoes by Guettard; later investigations in Chaîne des Puys, Mont-Dore and Velay, from Desmarest to Scrope; Vivarais: a major cradle of early stratigraphy in connection with Giraud Soulavie, and a privileged terrain for the rise and renewal of uniformitarian valley-carving theories from the former up to Lyell; Alès district and the outstanding early observations by Abbé de Sauvages; Pont du Gard and Montpellier, another example of pioneering essays in stratigraphy overlooked so far; Languedoc volcanoes; the Camargue and Henri Gautier; the Provence landscape from Arles to Marseille, familiar to the author of Telliamed.

On this occasion a guide-book was printed as a special issue (no 19, 1979) of "Histoire et nature" (the recent leading French journal especially devoted to the history of natural science). Though considered to be one of the official excursion guide-books of the International Congress, "Histoire et nature" had to cover by far the largest part of the cost. Again, COFRHIGEO offered a subsidy within the limits of its own means. It is important to draw attention to the fact that this guide-book was written (by F. Ellenberger) and illustrated (by Mme. G. Legée) to become a permanent tool available to all historians of geology. All localities and routes are very clearly indicated so as to allow an individual traveller to find by himself the many sites selected for their historical importance (a full hundred). With modern maps and documents in his hands, the

geologist will be in position to compare early observations (often surprisingly acute) with recent studies. Many former interpretations are by far better to understand when confronted with the unchanged reality in the field.

At the same time, the guide-book is a kind of summary of the whole evolution of geological knowledge and thinking, (from the beginning up to the 1830's) pertaining to a large part of France. A great deal of information is condensed in short quotations and multiple references, either given in the text or as foot-notes. In fact, the guide-book has been written to serve at the same time as an Introduction to the history of French geology (from a new point of view), in which some aspects of continental (autochthonous) studies of the earth overlooked so far have been brought to light. Among these, for instance, is the strength of actualism in pre-Revolutionary France; Lyell's uniformitarianism was but a renewal! The reader is directed towards many yet little-known authors and works of importance. Their neglect by historians has led to biased pictures of the birth of geology.

The guide-book consists of 29 pages text (32.000 words) and 16 glossy paper plates (facsimile of old engravings pertaining to visited sites, plus some detailed itineraries). The format is 21x27 cm. The cover is illustrated with another facsimile of historical significance.

c) Proceedings of the 1980 INHIGEO symposium. - Another duty incumbent upon COFRHIGEO at the moment is to partly subsidize another special issue of "Histoire et nature", which without doubt, should interest all historians of geology. It consists of a collection of original articles, 50 per cent of them in English, covering the Symposium held in Paris in July 1980, both as part of the 26th International Geological Congress and as part of the scientific meeting of the IXth INHIGEO Symposium. The symposium was also sponsored both by COFRHIGEO and by the French Committee for

the History and Philosophy of Science. The theme chosen was: The development of geology up to the death of Cuvier (1832): the works in French language in international exchange of ideas. Without any external support, "Histoire et nature" has decided to publish the whole set of articles, thus taking a financial risk. The volume is due to come out at the end of 1982 (proofs are already being corrected). It includes two introductory chapters (by F. Ellenberger and R. Hooykaas) and a general bibliography compiled by K. Taylor. The appearance will be that of a 16x24 cm book, 150 pages (ca. 70.000 words), with glossy cover.

3) Conclusion

Although "Histoire et nature" is chiefly devoted to the history of biology, the editorial board (on the request of COFRHIGEO) was kind enough to issue the two volumes mentioned above as special number of the journal. We think that all historians of geology should feel indebted toward this generous venture and feel obliged to order copies of both books.

The price of the guide-book is (at the moment) 50 French francs. The price of the Symposium proceedings will be 120 French francs. Please add mailing costs (6 francs via surface mail).

Orders are to be addressed to:

HISTOIRE ET NATURE, c/o Bibliothèque centrale du Muséum national d'Histoire naturelle, 38, rue Geoffroy-Saint-Hilaire, 75005 Paris.

- Payment to postal account: C.C.P. 10040-45 Paris, to the order of "Histoire et nature".

The titles of the articles of the Symposium book are as follows: (François Ellenberger, editor):

LE DEVELOPPEMENT DE LA GEOLOGIE DE LANGUE FRANCAISE, DANS SES RELATIONS INTERNATIONALES, DES ORIGINES A LA MORT DE CUVIER.

- F. Ellenberger. Introduction; présentation du Symposium. Esquisse d'une trajectoire de la Géologie francophone jusqu'en 1832.
- R. Hooykaas. Pitfalls in the Historiography of Geological Science.
- R. Halleux. La littérature géologique française de 1500 à 1650 dans son contexte européen (résumé).
- K.B. Bork. Cross-Channel currents: eighteenth century French language responses to British theories of the Earth.
- Observations à la communication de Kennard Bork, par G. Tischer.
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- M-L. Hemphill-Loir. Some Geological aspects from coastal profiles by Charles-Alexandre Lesueur, and observations by other members of the Nicolas Baudin expedition to the South-Seas, 1800-1804 (résumé).
- K.L. Taylor (et al.). Bibliographie sommaire sur le développement de la géologie de langue française jusqu'en 1832.

F. Ellenberger

History of Geology in America (1981)

(Summary of the Annual Report on the Activities in History of Geology in America published in "Geotimes", February 1982, by Kennard B. Bork)

The year was only four days old when the symposium "Alfred L. Wegener (1880-1930) and the Revolution in the Earth Sciences" was presented at the Toronto meeting of the American Association for the Advancement of Science. A prime issue in the symposium, arranged by Henry Frankel (Missouri, Kansas City) and Harold Burstyn (U.S. Geological Survey, Reston) was the reception of Wegener's drift theory throughout the world. The January 1981 issue of "North-eastern Geology" contained an illuminating set of papers on the growth of American geology. William M. Jordan (Millersville) edited the collection, which originated as a symposium at the 1980 meeting of the Northeastern Section of the Geological Society of America. James X. Corgan (Austin Peay) is editor of a soon-to-appear volume on "History of the Geological Sciences in the Antebellum South", representing papers given at the 1980 Southeastern Section meeting of the GSA. Several other works appearing in 1980 should be mentioned for their 1981 impact. G.K. Gilbert was well served during the Christmas 1980 season by the publication of Stephen J. Pyne's "Grove Karl Gilbert: A Great Engine of Research" and by GSA Special Paper 183, edited by Ellis L. Yochelson, "The Scientific Ideas of G.K. Gilbert: An Assessment on the Occasion of the Centennial of the U. S. Geological Survey (1879-1979)". Geology's sister disciplines of paleobotany and oceanography received historical attention with the 1980 publication of "Oceanography: The Past", edited by Mary Sears and Daniel Merriman, and Henry N. Andrews' "The Fossil Hunters: In Search of Fossil Plants".

The First North American Conference of the Society for the Bibliography of Natural History was hosted in October at the

Academy of Natural Sciences, Philadelphia. Robert Hazen (Carnegie Institution) recounted his efforts in compiling "American Geological Literature 1669-1850" and Ian McPhail (Morton Arboretum) discussed "Natural History in Utopia: the work of Say and Michaux at New Harmony". The 1981 annual meeting of the Geological Society of America was held in Cincinnati and the city's role as a training ground for paleontologists was honored by the GSA History of Geology Division's symposium "The History of American Paleontology: Selected Views". Kenneth E. Caster (Cincinnati) discussed the Cincinnati heritage in paleontology; Henry N. Andrews (Connecticut) commented upon the history of paleobotany; Joseph T. Gregory (Berkeley) integrated the development of plate tectonics and studies of land vertebrates; Stephen J. Gould (Harvard) showed how the investigation of invertebrate fossils from one locality could lead paleontologists with different conceptual models to divergent conclusions; Leonard G. Wilson (Minnesota) highlighted aspects of Charles Lyell's work in North America; Clifford M. Nelson (U.S. Geological Survey, Reston) outlined the work of Federal paleontologists from 1804 to 1904; and Michele L. Aldrich (American Association for the Advancement of Science) discussed the paleontological contributions of women in the era from 1840 to 1960. The latter paper was coauthored with Margaret W. Rossiter (Berkeley) and Sally G. Kohlstedt (Syracuse). Also presented at Cincinnati were papers by Gerald D. Prager (Howard-Donley Associates) on "Fenneman and Bucher: the early maturity of geological science" and George Merk (Michigan State) on "The legacy of Douglass Houghton (1809 - 1845), Michigan's pioneer geologist". Geologically oriented papers at the History of Science Society meeting, held in Los Angeles in late December 1981, include: Leroy E. Page (Kansas State), "Charles Lyell and the Glacial Theory, 1857 - 1873"; John W. Servos (Princeton), "Occupying the Borderland: Geochemistry in America, 1890-1915; Philipp R. Sloan (Notre

Dame), "Darwin, Vital Matter, and the Unity of Nature"; and John J. Zernel (Oregon State), "An Evolutionist Ideal of Natural Science: The Geological Survey and John Wesley Powell". At the January 1982 meeting of the American Association for the Advancement of Science, held in Washington, D. C., two symposiums were conducted which focused upon historical questions. "What Happened to Darwinism Between the Two Darwin Centennials 1959-1982?" was considered by Walter Fitch (Wisconsin), Stephen J. Gould (Harvard), Ernst Mayr (Harvard), and G. Ledyard Stebbins (Davis). Albert Carozzi (Illinois), Henry Frankel (Missouri, Kansas City), Stephen J. Gould (Harvard), Ekaterina Miljutina (formerly, Academy of Sciences, USSR) and Neil Opdyke (Lamont-Doherty) pursued the topic "What Happened to the Idea of Moving Continents After Wegener Proposed It?"

All geologists will appreciate the November 1981 issue of "The Journal of Geologic Education", with its color centerfold of William Maclure's 1799 (1817) map of North America. Among works in progress in late 1981 are the dissertations of Marguerite Carozzi (Illinois) on "Voltaire's Attitude toward Geology" and Abdullah Al-Omar (Harvard) on "The Reception of Darwinism in the Arab World". Also to anticipate in the near future is the publication of Volume III of Mary C. Rabbitt's history of the U. S. Geological Survey, "Minerals, Lands, and Geology for the Common Defence and General Welfare, 1904 - 1939".

After five years of existence, the History of Geology Division of the Geological Society of America has grown to a membership of 365. Ellen T. Drake (Oregon State) takes over the 1982 chairing of the Division from Kennard B. Bork (Denison), 1981 chairman and convener of the Cincinnati symposium on the history of American paleontology. Dr. Drake is currently planning a symposium for the 1982 GSA meeting (New Orleans) which will center on the development of geology in North America after 1879. As the Decade of North

of North American Geology nears its pivotal year of 1988, the Division plans to produce a number of works which will celebrate the centennial of the Geological Society of America and the growth of geology in general.

History of Geology in Poland (1982)

Two institutions of the Polish Academy of Sciences are statutorily engaged in the study of the history of geological sciences. The Department of the History of Geological Sciences and the Archives of the Museum of the Earth is lead by Dr. J. Garbowska, whilst the Department of the History of Natural Sciences of the Institute of the History of Science, Education and Technology is lead by Prof. J. Babicz. Within the latter Department, there are two working groups: one on the history of natural sciences (lead by Assist. Prof. Z. Wójcik), and one on the history of cartography (lead by Assist. Prof. J. Janczak).

In the Museum of the Earth, Dr. J. Garbowska's studies are devoted to the history of geological concepts in the first half of the 18th century. E. Studencka is investigating the history of Polish studies on the Tertiary period, and Z. Wójcik the explorations of Polish earth scientists in Russia before 1914. The main subject of the abovementioned Department of the Institute of the History of Science, Education and Technology is the development of knowledge of the Polish nature, whereas studies on the history of geological investigations in Poland during the period 1919-1939 are carried out by J. Skoczylas.

Some local museums in Poland are also interested in the history of geology, for example the Museum of Salt Mining in Wieliczka, the Natural Museum in Kazimierz Dolny or the Mining Museum in Zabrze. Scientific societies are very active organizing meetings as well as publishing papers on

the subjects in question. Special mention should be made of the Polish Geological Society (Annales Soc. Geol. Polon. 9), the Copernicus Polish Naturalist Society ("Kosmos" and "Wszechświat"), the Polish Mineralogical Society (Mineralogia Polonica), a group on the History of Paleontology within the Paleontological Commission of the Committee on Geological Sciences of the Polish Academy of Sciences (lead by Dr. E. Barczyk), the Association of Friends of Old Polish Mining, Metallurgy and Industry etc.

Problems of the history of geological sciences are also studied in some Polish universities, but so far there has been no special department of this type in our country. In 1981/82, a course on tectonical concepts was held at the Silesian University, and a discussion devoted to the activities of the geologist and artist M. Limanowski was organized at Warsaw University. Historical problems were included in the lectures on geological methodology (e.g. by Prof. S. Dzużyński at the Jagellonian University).

The members of INHIGEO continued their individual programmes of study in 1982. A. Gawel published an essay on the geological work of J.U. Niemcewicz in America and Poland, A.S. Kleczkowski completed his research on the initial period of the Academic Mining School in Kielce (founded in 1816), W. Narewski collected further biographical data on Polish geologists and mineralogists, and S. Czarniecki prepared a monograph on the conditions of the development of geology in Poland in the second half of the 18th century. Moreover, the latter (together with A.S. Kleczkowski and Z. Wójcik) participated actively in several meetings connected with the 200th anniversary of the foundation of the Ore Commission - the first Ministry of Geology, Mining and Metallurgy in Poland.

Altogether, about 20 persons are fully engaged in research in the field of the history of geological sciences in Poland. They are publishing on this subject in both specialist

("Przegląd Geologiczny", Annales Soc. Geol. Polon., Mineralogia Polonica) and historical periodicals (as "Kwartalnik Historii Nauki i Techniki" - Quarterly Journal on the History of Science and Technology, "Studia i Materiały z Dziejów Nauki Polskiej" - Studies and Materials from the History of Polish Sciences, etc.). More than 50 publications appeared until the end of 1982, including detailed biographic obituaries on the two late INHIGEO members K. Maślankiewicz and A. Łaszkiewicz.

Several anniversaries were celebrated in 1982. The most important of them was the 200th anniversary of the foundation of the Ore Commission. The Society of Friends of Old Polish Mining, Metallurgy and Industry organized a scientific meeting on 9 October 1982 with the following lectures: A.S. Kleczkowski, W. Rózański, Z. Wójcik - The Ore Commission, its origin and activities; J. Jaros - Poles in foreign technical schools; S. Czarniecki - Social initiatives of geological exploration during the reign of Stanisław August Poniatowski; D. Molenda - The activities of the Ore Commission in Olkusz; Z. Rubinowski - An interpretation of a mining plan of Miedziana Góra from 1781. All the lectures were also dealing with the international connections of Polish geology, manifested, for example, by the activities of J.Ph. Carosi, J.J. Ferber, A. Soldenhoff and L. Buest. In addition to that, the main directions of the development of geology in the pre-Staszic period were discussed as well.

The 50th anniversary of the foundation of the Society of Earth Museum in Warsaw was dealt with in Z. Wójcik's book "An outline of the history of Polish societies of friends of earth sciences 1932-1981". It deals with the history of the Society of the Earth Museum (1932-1948), the Polish Association of Lovers of Earth Sciences (1957-1972) and the Polish Association of Friends of Earth Sciences (since 1972). The Museum of the Earth in Warsaw organized a jubilee

meeting connected with the 20th anniversary of the death of S. Małkowski, one of its most outstanding founders and directors. It was accompanied by an exhibition of archival material. Another meeting was organized to remember H. Czechtowski who died in 1982. It was devoted to the history of paleobotanic studies in Poland, particularly with regard to the investigations of brown coal deposits in Turoszów.

During the annual session of the Group of Historians of Cartography, J. Babicz presented his ideas on the problems of geological maps in the 18th and 19th centuries, and J. Skórczyński spoke about geological cartography in the interwar period (1920-1939). Theoretical and practical problems of Polish geology in the years 1781-1783 were discussed by Z. Wójcik at the meeting of the Group on the History of Natural Sciences.

The Group on the History of Paleontology is preparing to hold a scientific meeting next year devoted to the 50th anniversary of the deaths of J. Siemiradzki and T. Wisniewski. Besides, there are plans to organize a Historical Commission affiliated to the Committee of Geological Sciences of the Polish Academy of Sciences. This commission is supposed to focus the activities of INHIGEO members and other scholars interested in the history of geological, mineralogical and paleontological sciences.

It should also be mentioned that the Institute of the History of Science, Education and Technology of the Polish Academy of Sciences published a volume "History of Polish, Russian and Soviet Polar Research" in 1982 which contains material of the Polish-Soviet symposium held in Wrocław in 1978. The papers deal with exploration work in Asia, Europe, Svalbard, Alaska, Greenland, the Antarctic and other regions.

Two well-known scholars of the history of natural sciences died in 1982: Prof. Franciszek Bieda (paleontologist - 20 September) and Dr. Stefan Zwolinski (speleology and mining - 29 September).

W. Narebski, Z. Wójcik

History of Geology in China (1982)

The symposium on Li Siguang's academic thought coincided with the inaugural meeting of the Li Siguang Studies Society of Hubei held in Wuchang, Hubei Province, between October 20 and 22, 1981. More than 50 people participated in the meeting. Prof. Li Siguang (formerly J.S. Lee) was an outstanding Chinese geologist, late president of the Geological Society of China (GSC) and Minister of Geology and Mineral Resources of the People's Republic of China (PRC). He was the founder of the School of Quaternary Glaciology and Geomechanics in China. The main task of the Society is to continue and promote the scientific activities of Li Siguang studies.

Li Siguang was born in the Hubei Province on October 26, 1889, and died in Beijing on April 29, 1971. He taught at the Hubei Technical College at Wuchang in 1910. On the occasion of the 10th anniversary of his death, a book entitled "The Li Siguang Memorial Volume" (which consists of 27 articles remembering Prof. Li and a chronological table of his life) was published by the Geological Publishing House in Beijing in 1981. This volume was compiled by the Geomechanics Commission of the Geological Society of China.

On the occasion of the 60th anniversary of GSC, a commemorative ceremony was held in the auditorium of the Beach Club of the Bedaihe Tourist Corporation on August 31, 1982. More than 500 people including 115 councillors of the GSC and 64 geologists from other countries participated in the meeting. At the opening session, Dr. Huang Jiquing (T. K. Huang), President of the GSC, delivered a speech entitled "A Brief Account of the Main Achievements Made in China during the Last 60 Years and Our Future Tasks". As guests of honour, Dr. N.H. Fisher, Dr. W.W. Hutchison and Dr. C.C. Weber delivered short speeches and conveyed their congratulations to the GSC.

A special exhibition was organized as part of the meeting, which was devoted to the history of academic activities of the GSC since 1922. A new set of 5 special stamps was issued in commemoration of the 60th anniversary of the GSC by the Ministry of Posts and Telecommunications of PRC. A series of articles deals with the review and prospect of specialized subjects on geological sciences in China. They were successively published in the "Geological Review" Vol. 28, 1982.

A book entitled "History of the Geological Society of China" by Xia Xiangrong and Wang Genyuan has been published by the Geological Publishing House in Beijing in August 1982.

The first symposium of the History Division of the Geological Society of China (HGGSC) was held at Peking University, Beijing, between October 5 and 9, 1982. The main topics of the symposium were "Divisions and comparative studies in the history of geological sciences" and "Fundamental problems of Chinese history of geology". More than 50 scholars participated in the symposium. About 40 of them delivered papers.

A symposium on the history of earth sciences organized by the Chinese Society of the History of Science and Technology was held at Guangzhou (Canton), Guangdong Province, in December 1982. The topics of the symposium were (1) History of earth sciences in China, (2) Comparative studies in the history of earth sciences in China and the West, (3) Modern history and the prospect of earth sciences.

Xia Xiangrong

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History of Geological Sciences in the Federal Republic of Germany

At present, there is neither a chair of the history of geological sciences nor a special research centre dealing with this topic at any FRG university. Special lectures on the history of geology seem to be held only by Dr. H. Nobis at the Copernicus Research Centre of the German Museum in Munich. The scanty experience available indicates that students in the South are more interested in such lectures than those in the West or Northwest. Activities in the field of the history of geology come mainly from geologists, paleontologists, mineralogists and geophysicists working at various universities.

On the suggestion of Prof. W. Kertz (Technical University Brunswick), a study group dealing with the history of geophysics was founded in 1982 which is working within the framework of the German Geophysical Society. The group is publishing "announcements" and intends to draw more attention to their work at the IUGG 18th General Assembly in Hamburg, 15 - 27 August (subject: Historical events or people; IAGA Interdivisional Commission on History). Detailed information may be obtained from Dr. W. Schroeder, Hechelstraße 8, D - 2820 Bremen-Rönnebeck.

Attempts are being made to set up similar study groups for other disciplines related to the history of geology. This could improve the exchange of information and may possibly help to bring about larger common research projects.

According to our knowledge, the following persons have been engaged in research work on the history of geological sciences for the last three years: Prof. W. von Engelhardt, Tübingen; Georg Hansen, Dreieich (History of hydrocarbon exploration); Prof. H. Hölder, Münster; Dr. Ulrich Horst, Hannover; Prof. W. Kertz, Brunswick; Dr. Udo Kindermann, Erlangen; Prof. F. Kirchheimer, Freiburg/Breisgau; Prof.

W. Langer, Bonn; Gaston Mayer, Karlsruhe; Dr. Nobis, Munich; Dr. Th. Schellmann, Hanau; Dr. W. Schroeder, Bremen-Rönnebeck; Prof. M. Schwarzbach, Cologne; Prof. W. Simon, Heidelberg; Prof. W. Querner, Heidelberg (History of biology with occasional reference to paleontology); Prof. O. Wittmann, Eimeldingen.

On July 3, 1982, Prof. B. von Freyberg died in Erlangen (born March 3, 1894). He is the author of important publications on the history of geology in Thuringia, on J.G. Lehmann, etc. The series "Erlanger Geologische Abhandlungen" published by him also contains some important works pertaining to the history of geology (J.J. Baier: *Cryptographica Norica*; B. Ehrhart: *De belemnitis suevicis*, etc.).

W. Langer has finished a commentary on the history of mining industry which will be published in supplementary volume 2 of the Georg Agricola commemorative edition to be printed in Dresden (GDR). On the occasion of Georg August Goldfuß' (1782 - 1848) 200th birthday commemorations were held in Bonn and in Goldfuß' birthplace, Thurnau near Bayreuth. W. Langer delivered an address in both places.

W. Langer

History of Geology in Czechoslovakia

Scientific work on the history of geology has been developing continuously in Czechoslovakia for a number of years. The main centres of these activities are the Prague National Technical Museum (Bohemia and Moravia) and the Mining Museum of Banská Štávnica (Slovakia). Of great scientific historical importance are also the symposia "The mining town of Příbram in science and technology" which have been held regularly since 1966. Apart from many other topics, they

have also been dealing with the history of mining industry or the history of geological sciences, e.g. the history of ore mining in the Bohemian counties and its significance for the development of society. Main emphasis has been on two topics: the development of mining laws and the history of ore mining in connection with the development of geological knowledge.

The first conference (1966), which was held on the occasion of the 750th anniversary of the town of Příbram, dealt with the beginnings of Bohemian ore mining. The topics of the other conferences were as follows: 1971 - Development of the exploitation and processing of silver-ore in history; 1975 - History of the exploitation of precious and non-ferrous metals; 1976 and 1977 - History of gold-mining; 1978 - The tradition of ore mining in the district of Příbram. The topic of the conference held in 1980 was "The significance of mining industry in material production from the period of manufacturing to the Scientific-Technical Revolution".

Several books have been published based on the conferences mentioned above. In 1976, the Prague National Technical Museum published a volume entitled "On problems of the development of ore mining in the history of Czechoslovakia". This was followed by "Bohemian iron industry in the period of the Industrial Revolution" (J. Koran; 1978) and "600 years of mining industry in Zinnwald" (M. Čada and V. Dejmek; 1978). All those activities are relevant not only to the history of mining industry, but also to the development of geological knowledge, as both aspects are mutually dependent.

In 1980, the Institute of World History and History of Czechoslovakia of the Prague Academy of Sciences held a conference on "Science in Czechoslovakia 1945 - 1960". Section 7 of this conference dealt with the development of geology in Czechoslovakia, the main emphasis being on the

history of economic and engineering geology. Contributions to this conference were published by J. Falta and L. Nový in their book "History of Natural Sciences in Date". There have also been remarkable activities on the history of geological sciences in Slovakia. The main initiative has come from the Mining Museum of Banská Štiavnica (Schemnitz), which has organized regular seminars on the history of geology in cooperation with the Slovak Society of the History of Science and Technology since 1963. A special highlight were the meetings in 1977 remembering two important events: the 250th birthday of M.J. Jacquin, first professor in chemistry and mineralogy at the old Mining Academy of Schemnitz, and the 150th birthday of the geologist D. Štur. In 1979, a further seminar was held on the occasion of the 140th birthday of the Hungarian geologist Alexander Gesell. At the same time, several works were published, for example an article by I. Herčko (1980): "On the activities of the members of the Jena Mineralogical Society who worked in Central Slovakia" and a book by I. Herčko et al. (1981): "On the history of geological sciences in Slovakia". With these activities the great traditions of geological sciences in Czechoslovakia have been continued, which, in their historical development, have always been closely connected with the development of mining industry. The annual activities on the history of geological sciences in Czechoslovakia help to clarify historical problems which, at the same time, are also of great importance for the extension of knowledge from an international point of view.

J. Urban

INFORMATION

XIth INHIGEO Symposium

at the 27th International Geological Congress

As part of the 27th International Geological Congress (IGC), Section 21 (S. 21.2.1.) will deal with problems concerning the history of geological sciences. The Congress will be held in Moscow, between August 4 and 14, 1984. The topic of the INHIGEO symposium is "History of Mineralogy". The following information on the topics and meetings planned has been given by the organizing committee in Moscow:

Section S. 21. History of Geology

Chairmen: V.V. Tikhomirov (USSR), R. Hooykaas (the Netherlands), T.G. Vallance (Australia)

Topics (21.1.)

- (a) S. 21.1.1. Development of ideas in the sciences of the material structure of the Earth (lithology, mineralogy, petrography, geochemistry, economic geology, hydrogeology, etc.).

On the stages of theoretical lithology and the geochemistry of sedimentary rocks. The role of comparative lithological and historical geological methods as scientific principles for the development of a lithological theory.

Chairmen: V.N. Cholodov (USSR), C. Amstutz (FRG)

- (b) S. 21.1.2. Development of ideas about the dynamics and structure of the earth's crust and the upper mantle.

Analysis of the development of ideas about the geodynamics of the interior of the earth. Ideas about the connections between deep structures and tectonic and minerogenetic surface structures and zones of present tectonic activity. Improvement of methods of deep structure research with regard to the earth's crust

and upper mantle.

Chairmen: Ju.K. Shukin (USSR), T. Watanabe (Japan)

Intersectional Symposium (21.2.)

(c) S. 21.2.1. History of Mineralogy (XIth INHIGEO-Symposium)

History of the development of mineralogical sciences in their main stages. History of the foundation of scientific schools and directions in mineralogy.

Chairmen: G.P. Barsanov (USSR), M. Guntau (GDR)

The INHIGEO Symposium will be jointly organized and held by the Section Mineralogy of the Congress, the International Mineralogical Association (IMA) and the International Commission on the History of Geological Sciences (INHIGEO).

INHIGEO will hold a business meeting during the 27th International Geological Congress in Moscow. Items on the agenda are as follows: report on the work of INHIGEO 1980 - 1984; plans and duties of INHIGEO 1984 - 1988; election of the Bureau of INHIGEO; election of corresponding members of INHIGEO.

All those interested in the scientific meetings in Moscow have the opportunity to contact: Prof. Dr. V.V. Tikhomirov, Geological Institute of the USSR Academy of Sciences, Pyzhevsky 7, Moscow 109 017, USSR.

- HESS

On the initiative of historians of earth sciences from the United States, Canada and Great Britain a "History of Earth Sciences Society" (HESS) has been founded. The society is planning to publish a journal on the history of earth sciences. HESS regards itself as an international organization. The draft constitution says: "The name of the organization shall be the History of Earth Sciences Society (HESS). The purpose shall be to promote interest

and scholarship in this discipline by publishing, organizing meetings, supporting the efforts of other associations displaying similar interests and other such similar scholarly and scientific endeavors." Membership dues in HESS (including the journal) were 15 U.S. dollars for 1982. Interim officers of HESS and proposed slate for 1983: President - David B. Kitts, Department of History of Science, University of Oklahoma, Norman, Oklahoma 73019, USA; President-elect - Albert V. Carozzi, Department of Geology, University of Illinois, Urbana, Illinois 61801, USA; Secretary - Ellis L. Yochelson, U.S. Geological Survey, E-501, Museum of Natural History, Washington, D.C. 20560, USA. HESS intends to carry out its activities as a scientific organization independent of INHIGEO, although several members and corresponding members of INHIGEO are involved in the foundation of HESS (C.C. Albritton Jr., W.O. Kupsch, D.A. Bassett, A.V. Carozzi).

- Publication of papers of the VIIIth INHIGEO Symposium (1978)

As we have been informed by Prof. Hölder, organizer of the VIIIth International INHIGEO Symposium "Regional influences on the origin and development of geological theories", a selection of papers read in Münster and Bonn in 1978 will be published in "Münstersche Forschungen zur Geologie und Paläontologie". This series is published by the Verein Münsterischer Geologiestudenten (Münster Union of Students of Geology).

The volume containing the INHIGEO papers will presumably be available in 1983. The price has not yet been fixed. All those interested in this publication are requested to apply to Verein Münsterischer Geologiestudenten, Geologisch-Paläontologisches Institut der Universität, Corrensstraße 24, D - 4400 Münster.

- History at the IUGG meeting 1983

The XVIIIth General Assembly of the International Union of Geodesy and Geophysics (IUGG) will be held in Hamburg between August 15 and 27, 1983. On this occasion, the Interdivisional History Commission (IAGA) will hold two symposia entitled "Historical Events or People" and "The Use of Historical Records in the Study of Geomagnetism and History". An excursion to Göttingen will be organized from 20 to 21 August, 1983, which includes visits to the places where C.F. Gauss and E. Wiechert had worked as well as to other sights in this area.

- 100th anniversary of the Swiss Geological Society

On the occasion of the 100th anniversary of the foundation of the Swiss Geological Society a conference was held in Interlaken on 18 September 1982 entitled "Geology in Switzerland Yesterday, Today and Tomorrow". The five principal papers read at this conference were as follows: A. Carozzi: Geology in Switzerland from the beginnings up to 1882; W. Nabholz: Foundation of the Swiss Geological Society; H. Masson: Geology in Switzerland from 1882 to 1932; R. Trümpy: Geology in Switzerland from 1932 to the present; A. Bally: Geology in Switzerland - prospects. The conference was preceded by three excursions (12 - 17 September) lead by H. Masson, S. Schmid and D. Bernoulli. It was the aim of these excursions to ascertain the present state of geological knowledge in Switzerland, but also to remember the work of geologists of previous generations. The meeting, which was attended by about 140 persons, emphasized the interest in history as well as an understanding for the rootedness of present ideas and knowledge in the works of the past.

- 60 years Geological Society of China

A special issue of the journal "Geological Review" (Vol. 28, no. 6, pp. 503 - 627, Beijing 1982) has been published on the occasion of the 60ieth anniversary of the foundation of the Geological Society of China (GSC). Apart from some general historical papers, this issue contains those papers which were read at the meeting devoted to the 60ieth anniversary of the GSC, among them "A brief account of the main achievements in geological science in China over the last 60 years and our tasks ahead" by the President of the GSC, Huang Jiqing (pp. 515 - 523; English abstracts pp. 524 - 527). The message of greeting delivered by the General Secretary of the International Union of Geological Sciences (IUGS), Dr. C.C. Weber, at the meeting in Beijing has also been published in this issue.

On the occasion of this event the Chinese Ministry of Post issued a special stamp and four stamps with mineralogical motives.

The Geological Society of China, which was founded in 1922 (membership 71), now has approximately 40.000 members working in 29 different commissions and divisions since 1964. The following journals were or are still being published by the GSC: "Bulletin of the Geological Society of China" (1922 - 1951), "Geological Review" ("Ti Chih Luen Ping") (since 1936) and "Acta Geologica Sinica" (since 1952).

- 100 years international geophysical research programmes

On the occasion of the 100th anniversary of the First Polar Year, 50ieth anniversary of the Second Polar Year and 25th anniversary of the International Geophysical Year, the Division of Cosmic and Earth Sciences of the GDR Academy of Sciences together with the National Committee on Geodesy and Geophysics of the GDR held a

colloquium of scientific historical character in Berlin on 17 June, 1982. The results achieved within the framework of those and similar programmes during the last century above all pertain to the fields of geodesy, geophysics, meteorology, hydrology and oceanology. They have had considerable significance for the development of knowledge in various fields of cosmic and earth sciences. Ten papers were read at the meeting devoted to various research programmes and their historical significance, among them the launching of 'Sputnik 1' by the Soviet Union on 4 October, 1957, which marked the beginning of space research by means of artificial earth satellites. The colloquium was meant to be a further step of including the history of geophysical (and neighbouring) disciplines into scientific historical considerations. The meeting has proved that scholars of these fields are getting more and more interested in historical problems of their disciplines.

- IIIrd GDR - USSR symposium

After the first two meetings in Berlin (1975) and Jerevan (1979), the third bilateral symposium on the history of geological sciences will be held in Greifswald (GDR) in October 1983 ("History of the development of philosophical and methodological ideas in earth sciences"). Apart from the academic part (papers and discussions) an excursion has been planned which will take the participants of the meeting to places of geological and cultural historical interest situated in the north of the GDR.

- History of Geology and Education in the USA

The National Association of Geology Teachers of the United States has embarked on a program for organizing a cooperative textbook for the history of geology. Twenty to thirty geologists and historians of geology are engaged in preparing separate articles on the histories of topics of geology for publication in the Journal of Geological Education and eventual republication as a text. The project is described in the November 1981 issue of "Journal of Geological Education" (Vol. 29, No. 5) published by the National Association of Geology Teachers (NAGT) Inc., 1041 New Hampshire St., Lawrence, KS 66044 (USA).

- Award to George W. White (USA)

Dr. George W. White, Research Professor of Geology, Emeritus, received the Geological Society of America Award for distinguished contributions to the history of geology. He is the first recipient of this award which has been established on an annual basis.

Dr. White's work in the History of Geology has been primarily in bibliography of History of Geology and investigations of very early American geology, a field which was practically unknown until he started work in it some 40 years ago. His work was much aided by the great collection of early geological works in the University of Illinois Library. The Geology Library of the University is one of the outstanding ones both Nationally and Internationally and is particularly rich in early publications. Professor White has contributed more than 25 articles to journals and several to symposium volumes on History of Geology. He was the U.S. representative to the Organizational Meeting of the International Committee for the History of Geology at Yerevan, Armenia, USSR, in 1967 where he was elected Vice-President for North America. He was Chairman of the U.S. National Committee for History

of Geology which was established in 1970. He had a part in the organization of the History of Geology division of the Geological Society of America in 1975. White has edited the 9 volume series of Contributions to the History of Geology published by Hafner Publishing Company and was a member of the committee chaired by Dr. Claude Albritton of Southern Methodist University in the selection and editing of the 37 volume collection of reprinting of significant works on History of Geology.

He is an honorary life member of the Society for the Bibliography of Natural History and is a Fellow of the Geological Society of America, the Geological Society of London and other professional bodies.

His professional work in Glacial Geology and its application to engineering, groundwater and general environmental geology is the subject of his professional work and that of his more than 35 Ph.D. students. Thus he has maintained two different professional careers over several decades with publications in each field. Dr. White was Professor of Geology and Head of the Department at UIUC from 1947 to 1965 and was Research Professor until 1971 when he became emeritus. His work and research continues, however, until the present with continuous series of publications both in Economic Geology and History of Geology.

- History of geological museums in the GDR

Between March 25 and 27, 1982, the study group on history and philosophy of the GDR Geological Society together with the Mining Academy of Freiberg held a national Symposium in Freiberg and Dresden entitled "Geoscientific collections and museums in the past and present". It was the aim of this symposium to deliver papers on scientific and historical aspects of the work of geoscientific museums and collections, including discussions of this topic.

50 people participated in the symposium. The 22 papers read at the meeting dealt with mineralogical, paleontological, stratigraphic and petrographical collections and their significance for the history of scientific knowledge and culture. Some papers also touched upon other fields of historical interest, such as geological and geodesic instruments, books, letters and documents, coins, medals and stamps. Of particular importance were papers on the history of collections and museums in general, biographically oriented papers on scholars of geological sciences who rendered outstanding services to collections, and papers dealing with the history of these institutions. Apart from the most important collections of the GDR in Berlin, Dresden and Weimar, which have a great tradition in this country, mention should also be made of some private collections (mainly from the 18th century), e.g. those of Adolf Traugott von Gersdorff (1744 - 1807), Abraham Gottlob Werner (1749 - 1817) and Johann Wolfgang von Goethe (1749 - 1832), which are kept in Görlitz, Freiberg and Weimar.

On the occasion of the symposium, a facsimile edition of A.G. Werner's work on mineralogical collections (1778) was published by the GDR Geological Society. The papers of the symposium will be published in "Zeitschrift für Geologische Wissenschaften", issues 10 and 11 (1983), Akademie-Verlag Berlin.

- Changes of addresses

The following address given on the list of members and corresponding members of INHIGEO in Newsletter No 14 (pp. 21 - 30) has been changed:

No 65: Dr. E.G. Malchassian
ul. Pocatnikov 5
375 010 Yerevan - 10
Arm. otdel. kavkazk. instituto mineral. syrja
USSR

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ANNOTATIONS

- Journal of Geological Education, vol. 29, no 5, Nov. 1981. (Editor: J.H. Shea, Univ. of Wisconsin-Parkside, Box 2000, Kenosha, Wisc. 53141 (USA)).

This Journal, published by the National Association of Geology Teachers, appears 5 times a year. It pays much attention to the history of geology: 1/6 of the articles in 1981 belong to this category.

The present issue contains a.o.: S.M. Totten, "Frank B. Taylor, plate tectonics and continental drift" (pp. 212 - 220) in which a recently discovered letter of Taylor is discussed where he claims to be the organisator of the drift hypothesis on the ground of his paper presented to the American Geol. Society in 1908 (publ. 1910). Taylor speaks of a brief note by Wegener reviewing that paper (1911). It should have given the first inspiration on this subject to Wegener. Totten has not been able to trace this note, but he points out that a review of Taylor's paper appeared in Geol. Zentralbl. Apr. 15, 1911, that is before Wegener, according to his own testimony, started to think on continental drift (viz. autumn 1911). In the carefully worded conclusion it is stated that the Taylor letter "demonstrates a closer Taylor-Wegener connection than hitherto realized".

In the same issue prof. C.J. Schneer's article "William Maclure's Geological Map of the United States" contains a beautifully-executed coloured reproduction of Maclure's map in its later edition of 1817 (reprinted under supervision of prof. G.W. White). This short article is intended by its author to be the first in a series which is to form an introductory textbook of history of geology. The articles should be concerned with the history of geology mainly as branch of the history of ideas. The early topics (like diluvialism) will be written by historians

of science; the later ones (plate tectonics, e.g.) by professional geologists. The whole project should serve to counterbalance the specialization in modern geological education, and therefore the series is planned as a course textbook. As prof. Schneer says: "The history of geology ... has a role in the education of those who are to represent the profession and it has a role in any general and liberal education".

R. Hooykaas

- J.J. de Vries, *Anderhalve eeuw hydrologisch onderzoek in Nederland* (One century and a half of hydrological research in The Netherlands), Editions Rodopi, Amsterdam 1982, 195 pp., 56 fig.

J. Veldkamp, *De geschiedenis van de broefening van de geofysica in Nederland en in de Overzeese Rijksdelen* (The history of the cultivation of geophysics in the Netherlands and in the overseas territories). Koninklijk Nederlands Meteorologisch Instituut, de Bilt 1982, 109 pp., 43 fig.

Dr de Vries' survey of the development of "scientific knowledge concerning water in the Netherlands" concentrates on subsurface water, mainly dealing with the theories about it and the methods of regulating (drainage) and exploiting it. The high population density and the rapidly extending industry caused problems of supply of water fit for consumption, agriculture and industry, so that "experimental geology" plays an important role in the economy of the country. The large share of geologists in keeping the country livable is convincingly shown in this historical exposition.

The study of the (emeritus) professor of geophysics J. Veldkamp deals with research on terrestrial magnetism, seismology, gravitation and exploration geophysics per-

formed in the Netherlands and the (former) territories in the East and West Indies, whereas also the work of Netherlands in other parts of the world is included. In particular in the Indonesian Archipelago important work has been done on seismology and on gravitation. F.A. Vening Meinesz's observations led him to a special tectonic theory. The results of measurements in the West Indies showed remarkable resemblance to those found in the East Indian Archipelago. As to the Atlantic Ocean Vening Meinesz, in opposition to Wegener, held that Africa and South America are approaching each other.

The general impression is that there was and is a very close cooperation between (geo-)physicists and geologists. Both studies show also that theoretical geology and practical applications went closely together.

In his preface Veldkamp points out that the Intern. Geol. Congress of New Delhi (1964) led to the foundation of INHIGEO, which in its turn gave a stimulus to the foundation of the Royal Netherlands Academy of Sciences' Commission on the History of the Geological Sciences (1974), which asked him to write this monograph. The background of dr de Vries' monograph is the same, and the history of geological research in the Netherlands' West Indies (which will appear soon), will be another fruit of the decision of 1964.

R. Hooykaas

- V.V. Tichomirov (Ed.): Story of geological map. - Essays on the history of geological knowledge, Vol. 21, Moscow: Nauka 1982. 279 pp., ill. (in Russian with English summaries)

There is elucidated the range of questions bound up with the making out and development of geological mapping. The working out of methods of geological survey in XVIII - XIX cc. is considered. There are defined some methodologi-

cal features of compiling of geological, paleogeographical, tectonic and other special maps of large regions and whole continents. The volume contains 25 papers by soviet geologists presented to the 10th INHIGEO-Symposium in Budapest (1982).

Author

- Francois Ellenberger and Gabriel Gohau: "A l'aurore de la stratigraphie paléontologique: Jean-André De Luc, son influence sur Cuvier". Revue d'Histoire des Sciences, t.XXXIV, no 3-4, Paris, 1981, pp. 217-257.

Many new advances in the history of geology are to be expected from a careful and unprejudiced reading of forgotten or despised authors of the past. De Luc (the elder) was first anathematized as the black sheep in his controversy with James Hutton, and pitied for his Biblebiased outmoded theory of the Earth. Afterwards he fell into nearly complete neglect.

The authors claim that De luc deserves much more consideration. His theological concerns being left aside once and for all, it appears that as early as 1791, he asserted that living beings have evolved to fit the modifications of the (marine) "Fluid" from which strata were precipitating: hence two parallel histories, the layers and the organisms, the latter becoming more and similar to the living species. Such is the explanation he gives of the succession of different fossils in the superimposed beds - with some good local evidence of the latter fact. One remarkable aspect of De Luc's insight is that he is already a transformist because of his sincere Christian faith, to save at all cost the unity of Creation against the (for him) abominable alternative of spontaneous generation.

Another point of interest is that a comparison between De Luc's prolix writings and the famed Discours of Cuvier

shows beyond doubt that the great anatomist, in numerous passages, just borrows ideas and terminology from De Luc, without naming his source. However, the catastrophes of Cuvier are far more destructive than those advocated by De Luc, which were only partly lethal to organisms and promoted changes (through generation) in the species.

Author

- V. Bialas: *Erdgestalt, Kosmologie und Weltanschauung. Die Geschichte der Geodäsie als Teil der Kulturgeschichte der Menschheit / The Earth's Body, Cosmology and Weltanschauung. History of Geodesics as Part of the Social History of Mankind / (Vermessungswesen bei Konrad Wittwer, Vol. 9). Stuttgart 1982, 365 pp. 73 fig., ISBN 3 - 87919 - 133 - 6 (in German)*

This book is a well-arranged outline of the history of geodesics from antiquity to the present. The author puts special emphasis on the geodesy, physical geodesics, geodetic astronomy, and partly also on geodetic surveying. Other fields, however, such as cartography, mine surveying and navigation have hardly been dealt with in this study. The book is impressive because of the broad range of ideas presented to illustrate the history of an individual discipline. The development of geodetic knowledge in history is clearly in the centre of the presentation, yet this is very well merged with the way in which scholars thought and acted in history, with important stages in the development of productive forces and with corresponding social events in the past, such as the revolutions in France (1789) and Russia (1917) or the World Wars of our century. In this way, the history of geodesics is seen as a phenomenon in the development of society rather than a mere descriptive enumeration of facts and persons in the past. This form of presentation is appro-

priate not only because of the various connections given in history, but also because it does justice to historical reality in a proper way.

M. Guntau

- History of Polish, Russian and Soviet Polar Research. - Proceedings of the Third Polish-Soviet Symposium on the History of Earth Sciences, 25-30 September, 1978, in Wrocław. Wrocław, Warszawa, Kraków, Gdansk, Łódź 1982, 609 pp., ISBN 83 - 04 - 01002 (in Russian and Polish)
- 37 papers dealing above all with the history of the exploration of arctic and antarctic areas have been published in the volume by Polish (J. Babicz, A. Jahn, K. Jakubowski, Z. Wojcik) and Soviet (I.A. Fedosejev, T.D. Iljina) historians of earth sciences. The papers were read at the bilateral conference in Wrocław in 1978. The volume consists of the following chapters: 1. the Arctic (European and Asian arctic areas; Spitzbergen; Alaska and Greenland), 2. the Antarctic, 3. Cooperation in fields of nonarctic research. The book provides a great deal of historical facts in an important field of current geoscientific research, and should therefore not only be of great interest to scholars of the two countries that prepared and held the symposium. Especially the Antarctic is an area which stimulates further cooperation of scientists from various countries. It is thanks to our Polish and Soviet colleagues that an important joint contribution has been made to demonstrate this kind of scientific cooperation.

M. Guntau

- William Glen: The Road to Jaramillo. Critical Years of the Revolution in Earth Science. - Stanford University Press, Stanford, California 1982, 459 pp., 71 photographs, 36 figs., ISBN 0 - 8047 - 1119 - 4 (in English)

The exceptional quality of this book manifests itself in the author's most welcome intention to show the revolutionary changes in geological ideas of the present through a chronological presentation. W. Glen, a geologist turned historian, author of "Continental Drift and Plate Tectonics" (1975), is working now as a research associate in the office for History of Science and Technology at the University of California, Berkeley. Based on his own experience, he describes how in the years 1957 - 66 "problems of young-rock dating, geomagnetic polarity reversals and seafloor spreading confirmed a theory that has transformed the earth sciences just as profoundly as the propositions of Copernicus, Darwin and Einstein overturned their worlds and disciplines". The well-written and well-arranged report explains the way in which essential elements of new geological ideas have developed. A great deal of publications has been studied to prove this development. Of particular value is the method of using interviews with more than 80 scholars as a source for the documentary report. It may well be expected that this book will arouse great interest not only in historical circles. Epistemologists and theoreticians of science will probably also take an interest in the book as it convincingly describes the genesis of a modern scientific theory on the basis of many individual works.

M. Guntau

- Extracts from V.I. Vernadskij's autobiography (B.M. Kedrov, A.L. Janshin, K.P. Florenskij). Moscow: Nauka 1981, 399 pp. (in Russian)

Based on documents and other kinds of material, this book gives a chronological survey of the life of the outstanding Russian scholar V.I. Vernadskij and describes the way in which he developed his scientific ideas. It also touches upon his contribution to the social life of his country as well as his views about moral standards, ethics and weltanschauung. Main emphasis is, however, on V.I. Vernadskij's own autobiographical notes: Extracts from the diaries he kept throughout his life, material from the planned book "Things experienced and imagined", fragments of his scientific and journalistic articles as well as letters.

The book contains comments and an index of the names of the persons mentioned in the text.

V.V. Tikhomirov

- Baskov, E.A.: Sergej Nikolajevič Nikitin. 1851 - 1909. Leningrad: Nauka 1982, 176 pp. (in Russian)

This book gives a thorough account of the contribution to geological sciences made by the corresponding member of the Russian Academy of Sciences S.N. Nikitin. His numerous works deal with various disciplines of geological sciences, such as stratigraphy, paleontology, paleogeography, hydrogeology and regional geology. The book contains material from Nikitin's private archives, several photographs published for the first time and several indices.

V.V. Tikhomirov

- Sokolov, V.A.: Aleksander Aleksandrovič Inostrancev.
1843 - 1919. Moscow: Nauka 1981, 104 pp. (in Russian)

The book gives an account of. A.A.Inostrancev's life and work, who was a professor at the University of Petersburg and a corresponding member of the Petersburg (since 1917 Russian) Academy of Sciences. He is the author of many works on geology and petrography, archeology and ethnography, paleontology, hydrogeology and paleogeography. He did pioneering work in various scientific disciplines. His name is closely connected with geological explorations in the north of Russia, the Altai Mountains, the Ural Mountains and the Caucasus.

V.V. Tikhomirov

- Sokolov, V.A. and V.G. Kuderenko: F.Ju. Levinson-Lessing in Karelia. Petrosavodsk: Karelia 1981, 80 pp. (in Russian)

The book deals with the life and work of the well-known Russian scholar and natural scientist F.Ju. Levinson-Lessing. His works are above all devoted to geology, pedology, paleontology, petrography and other geological disciplines. He made a great contribution to the development of the theory of mountain rocks and to our knowledge about the geological structure of Karelia. He also paid great attention to the history of science.

The book is illustrated with several photographs.

V.V. Tikhomirov

Notes