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## BULLETIN OF THE GEOLOGICAL SOCIETY OF CHINA

PROCEEDINGS OF THE THIRD ANNUAL  
MEETING OF THE GEOLOGICAL SOCIETY OF CHINA,  
HELD IN PEKING, JANUARY  
3, 4, AND 5, 1925.

BY Y. C. SUN, SECRETARY.

MORNING SESSION OF SATURDAY, JANUARY 3.

PRESIDENT W. H. WONG IN THE CHAIR

The first session of the Third Annual Meeting was called to order at 10 o'clock a. m. Saturday, January 3 in the library building of the National Geological Survey of China, Peking by President Dr. W. H. Wong.

Dr. W. H. Wong, also representing the Council, reported on the constitution of the Book Purchase Fund (購書基金) of the Society; the report is briefly summarized as follows:

"The need of library reference is felt by every geological worker in Peking. This need is largely met with by the starting of the geological library in 1922 under the auspices of the Geological Survey. The latter institution is, however, far from being adequately financially supported by the Government and the geological library is still without any reliable fund for buying new publications. Upon the suggestion of Mr. C. Y. Wang, the Council has decided to start the campaign for a special fund for purchase of geological and mining publications to be deposited in the Geological Survey Library in the name of the Geological Society. A permanent Trustee Committee was formed with the Presidents and Vice-Presidents of the first three years of the Society viz: Messrs. V. K. Ting, C. Y. Wang, J. S. Lee, H. T. Chang and W. H. Wong as trustees for the administration of the fund. The fund is to be of a permanent character, only its annual interest will be used for book buying. The following contributions have been received during the first year, 1924:

from	C. Y. Wang 王佐臣君 .....	\$ 500
„	The Kailan Mining Administration 開灤礦 務總局.....	2,000
„	W. H. Wong 翁詠霓君.....	50
„	T. L. Ling 林劍秋君.....	250
„	Y. W. Chu 朱言吾君.....	500
„	K. C. Li 李國欽君.....	500
„	C. C. Lu 盧志學君.....	100
	Total .....	<u>\$ 3900</u>

No expenditures are yet to be reported.

The fund so far obtained is far from sufficient as the interest is only to be used. It is estimated that the minimum expense for buying publications pertaining to different branches of geology is about \$ 2000 per year, therefore a permanent fund of \$ 20,000 is necessary. It is earnestly hoped that members of the Society will contribute to increase this fund and interest persons or organizations to lend their generous support to the Society's effort of promoting geological research in China".

Then Dr. W. H. Wong read out the regulations of the said library fund, which were unanimously approved by the meeting and adopted as by-laws of the Society.

#### SECRETARY'S REPORT

To the Council and Members of the Geological Society:

*Meetings*.—During the last year only one general meeting, beside the annual meeting, was held in the library building of the National Geological Survey of China in Peking. It was arranged in two evenings and six communications were presented. The proceedings of this general meeting will be published in the Bulletin Vol. III, No. 3 of our Society.

*Membership*.—Twenty new fellows, seventeen associates and one honorary member were elected during the last year.

The Society now has two honorary members—Prof. H. F. Osborn, President of the American Museum of Natural History and Prof. Emmanud Kayser, the noted German Palæontologist and Geologist. It also has a membership of 112 fellows, 36 Associates, and 16 corresponding members.

Respectfully submitted,

Y. C. Sun,

Secretary.

#### TREASURER'S REPORT

To the Council & Members of the Geological Society:

Owing to the absence of Mr. T. I. Loo, the elected Treasurer of the Society for the last year, the duty of the office was discharged by Messrs. S. C. Chian & T. C. Chow. We beg to submit the following report for the year ending December 31st, 1924.

#### *Receipts*

Cash on hand Dec. 31st. 1924	\$ 570.157
Fellowship dues 1924	295.400
Life-member dues 1924	50.000
Associate dues 1924	44 000
Donations by Geological Survey	250.000
Selling Bulletins	28.050
Interest Nov. 30, 1924	13 320
Total Receipts	<u>\$ 1250.927</u>

#### *Expenditures*

Secretary office:—

Administration	\$ 28.400
Postage	2.000
	\$ 30.400

Treasurer office:

Administration	5.500
Postage	48.330
	\$53.830

Printing Bulletins (Vol. II, Nos. 3-4,

Vol. III, No. 1)	630.000
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Expense for the Annual Meeting of the last year	33.220
Expense for the general meetings of the last year	14.240
Miscellaneous	9.360
	<hr/>
Total expenses	\$ 771.050
Balance on hand Dec. 31st, 1924	\$ 479.877
	<hr/>
	\$ 1250.927
	<hr/>

Respectfully submitted,

T. C. Chow &

S. C. Chian,

Acting Treasurer.

#### EDITOR'S REPORT

To the Council and Members of the Society:

The first two parts of the bulletin volume 3 have been published. They consist of 190 pages. The second two numbers are in press.

Respectfully submitted,

Liang F. Yih,

Editor

#### AMENDMENT OF THE CONSTITUTION

The Council in view of the imperfection of the constitution of the Society appointed a Committee to make a memorandum for the amendment of the constitution and to make a draft of by-laws. The committee consisting of H. T. Chang, J. S. Lee & L. F. Yih, submitted their recommendations to the Council who in turn presented them to the Annual Meeting. They were passed and adopted. The amended constitution together with the by-laws will be published in a pamphlet.

#### ELECTION OF OFFICERS

The secretary declared the election of officers for 1925 as follows, the balloting having been conducted in accordance with the constitution.

*President*

C. Y. Wang (王龍佑)

*Vice-Presidents*

J. S. Lee (李四光)

A. W. Grabau (葛利普)

*Secretary*

Y. C. Sun (孫雲鑄)

*Treasurer*

H. T. Lee (李學清)

*Councilors*

Term expires 1927

C. H. Chu (朱家驊)

C. Y. Hsieh (謝家榮)

The meeting adjourned at 12:15.

AFTERNOON SESSION OF SATURDAY, JANUARY 3,

PRESIDENT W. H. WONG IN THE CHAIR

The meeting was reconvened at 2 o'clock. The following papers were read.

SOME GEOLOGICAL NOTES FROM KANSU.

*J. G. Andersson*

Presented with notes.

Discussed by Profs. W. H. Wong & A. W. Grabau as follows.

*W. H. Wong:* In 1921 when Mr. C. Y. Hsieh and I went there, we found no fossils in the younger deposits of the Liu Pau Shan region. I am glad to know that Dr. Andersson obtained fresh water shells as well as mammalian bones from that region and I think the geological age can be easily fixed by means of these fossils.

*A. W. Grabau:* Planorbis shells occur very widely in vertical distribution and therefore it is pretty difficult to determine the age of the formation by their aid. However, the exact age of this will be easily ascertained from the vertebrates collected by Dr. Andersson in the Kueite formation.

Some remarks was also made by P. L. Yuan who was with Dr. J. G. Andersson in Kansu during the last two years.

The full paper will be published in the bulletin.

THE SILURIAN STRATIGRAPHY OF LO NO PING, I CHANG.

*C. Y. Hsieh & Y. T. Chao.*

Presented by Mr. C. Y. Hsieh with charts, diagrams & selected specimens.

Some remarks and discussions were made by Dr. W. H. Wong & A. W. Grabau as follows.

*W. H. Wong:* Invites members of the Society to go to see the whole material collected by them and exhibited in the eastern new hall near the main entrance of the National Geological Survey.

*A. W. Grabau:* The trilobite fauna found in this region is closely related to the Silurian of Bohemia and the graptolites are quite similar to those found in Scotland and England, thus showing that they had made an extended journey across the entire European and Asiatic continents at a time when a continuous waterway extended from southern Scotland to the Yangtze Valley in China.

The full paper will be published in the bulletin.

GRAPTOLITE BEDS IN EASTERN KANSU.

*P. L. Yuan*

Presented with notes and sections.

Discussed by Profs. A. W. Grabau and G. B. Barbour as follows.

*A. W. Grabau:* These Graptolites which occur only at certain horizons in the thick sandstone series were in a remarkable state of preservation and were of types, all of which are known in eastern North America, especially in the rocks found in the vicinity of Albany, New York, and which are known as the Normanskill Graptolites.

*G. B. Barbour:* Would the discovery of this fauna make some change on the Palaeogeographic map of China during the middle Ordovician time and what is the exact relationship of this formation to Machiakou limestone of N. China?

*A. W. Grabau* (replied): Only a very slight change is required to be made. In Kansu these should be a small extension of the delta which was formed at the mouth of a river and the Graptolite fauna of Pingliang shale corresponds in age to the *Actinoceras* fauna of the Machiakou limestone.

The full paper will be published in the bulletin.

ON THE STRATIGRAPHY OF NORTH SHENSI

*C. C. Wang*

Presented with maps, diagrams and fossil specimens.

Discussed by Dr. W. H. Wong and Prof. G. B. Barbour, and replied by the author.

*W. H. Wong*: Mr. Wang has discovered for the first time the Upper Jurassic fishes in the thin-bedded limestone. These fossils will be studied by Dr. Smith Woodward of the British Museum of England. The overlying cross-bedded red sandstone appears to be of Cretaceous age.

*G. B. Barbour*: Was there any volcanic rock found in the lower Jurassic coal series?

*C. C. Wang* (replied): Only volcanic agglomerates in isolated portions were found on the summits of the hills, west of Chen Chiang Pao, Fu Ku Hsien.

*G. B. Barbour*: Is the contact between the red clay and the loess distinct at Ho Chia Mao, Ching Pien Hsien?

*C. C. Wang* (replied): The contact is quite readily distinguishable.

The full paper will be published in the bulletin.

THE DEPOSITS OF THE SANG KAN HO VALLEY

*George B. Barbour*

Presented with detailed sections and maps and also with specimens of fossils (bones of *Rhinoceros* and shells of small mollusks).

Discussed by Drs. V. K. Ting and A. W. Grabau.

*V. K. Ting:* Loess represents the upper part of our Pleistocene, whereas the lower part is the Sanmen series. Between them there was an eroded interval indicated by the fact that in places the Sanmen series was eroded away before the deposition of the loess.

*A. W. Grabau:* We may divide the Psychozoic formations into (1) older Pleistocene, or Polycene (2) younger Pleistocene or Pleistocene proper and (3) Holocene. Loess probably represents the deposits of the late Pleistocene proper, while the Sanmen series belongs to the Polycene.

#### ANNUAL DINNER

At 8:30 p. m. Saturday, January 3, Annual Dinner was held at Lai Chin Yü Hsien (來今雨軒) of the Central Park.

Members and guests were present. Among the guests of the Society were Dr. Ferguson, Adviser to the Chinese Government; Admiral T. K. Tsai, Director General of the Customs; Dr. Monling Chiang, Chancellor of the National University; Prof. H. S. Galt, Acting President of Yen Ching University; Dr. S. G. Lee, Dean of the Biological department of the Normal University and a number of other prominent persons. Dr. V. K. Ting acted as toast master. Speeches were made by Messrs. Ferguson, W. H. Wong, H. S. Galt, J. G. Andersson, Monling Chiang, L. Kao, Kungpa King, Sotze King, Admiral T. K. Tsai and A. W. Grabau.

#### VISIT TO THE MUSEUM OF THE NATIONAL GEOLOGICAL SURVEY OF CHINA, SUNDAY MORNING, JANUARY 4.

The Sunday morning was devoted to the visit to the Museum of the National Geological Survey of China. The collections exhibited in two large new halls near the entrance of the Survey, were specially arranged and the cases with materials for exhibition were orderly arranged from Sinian to Quarternary.

Particularly striking to visitors were the new collections, especially those of Ordovician Graptolites and Dinantian Brachiopods of Kansu, Dinantian Corals of Yangtze region and the Silurian Corals and Graptolites of Hupei, which were all made by the members of the Geological Survey during 1924.

AFTERNOON SESSION OF SUNDAY, JANUARY 4.

PRESIDENT W. H. WONG IN THE CHAIR.

The meeting was reconvened at 2 o'clock and the following papers were presented and discussed.

GEOLOGICAL NOTES ON EASTERN KANSU

*P. L. Yuan*

Discussed by Prof. A. W. Grabau and Drs. J. G. Andersson & W. H. Wong.

An abstract will be published in the bulletin.

ROCK FORMULA

*J. S. Lee*

Presented with notes and charts.

Discussed by Dr. W. H. Wong and Profs. George B. Barbour and Jan Shi Sen.

The full paper will be published in the bulletin.

ON THE NEPHELITE-SYENITE OF MAO MAO KOU IN HUI LI DISTRICT,  
SZECHUAN PROVINCE

*V. K. Ting and W. H. Wong*

Dr. V. K. Ting first outlined the general geology of Hui Li district where nephelite syenites were found.

(Abstract)

The specimen is collected from a small outcrop near the Lolo village of Mao Mao Kou, some 30 km. N.N.W. of Hui Li district in S. Szechuan, on the N. slope of Lung Tsao Shan, a prominent mountain some 8,000 feet above the sea, entirely covered by a basaltic lava of Permian age. The latter weathers into a residual red clay which covers the lower slopes. The contact of the syenite with the Lung Tsao Shan lava was not observed owing to the thick cover. East of the occurrence a series of steep dipping red shales appears. The exact relation of this series with the syenite is not clear, but it is probable that they are in actual contact. Further east the red shale series is thrown into contact with a coal series containing Rhætic plant fossils—probably by an overthrust as the whole coal series is highly folded.

Dr. W. H. Wong followed with the petrographical note presented with specimen and micro-photo.

(Abstract)

The specimen studied was collected by Dr. V. K. Ting in 1913 from Mao Mao Kou, a locality N. W. of Huei Li district, Szechuan province. Only one small specimen is available, which shows itself as a medium grained rock of granitic structure. Its essential elements are easily recognizable by a megascopic examination, consisting of orthoclase, amphibole and nephelite. It was the first nephelite rock received by the Geological Survey.

Under the microscope, orthoclase appears as the dominant element mostly in tabular shape parallel to the face (010) and is often twinned according to the Carlsbad law with irregular contact line. Plagioclase is very rare.

Hornblende is the only ferro-magnesian mineral. It shows a very strong polychroism, from green brown to dark brown, and appears almost opaque in the direction of maximum absorption. As result of secondary alteration some crystals of this mineral become almost entirely opaque by the great abundance of small grains of magnetite which probably results from the aggregation of iron oxide originally contained in the hornblende.

Nephelite is easily recognisable in rather large crystals although mostly allotriomorphic in shape. It is quite fresh with little trace of alteration. It is less abundant than the orthoclase, but certainly constant and important enough in the composition of the rock to call it nephelite syenite.

The texture of the rock is mainly granitic. But the prismatic crystals of the hornblende show a distinct parallelism in their arrangement. This parallel arrangement is neither observed in the orthoclase nor in the nephelite.

As accessory elements, zircon, sphene and apatite are frequently present.

In 1900 Michel Lévy and Lacroix have identified a nephelite syenite of Leclère's collection from east of Huei Li district<sup>‡</sup>. As Dr. Ting's specimen came from further north of the district, the two nephelite-syenites are certainly of different occurrences. The characters of the rocks as briefly described above are also different from those given by Lévy and Lacroix. Leclère's specimen contains according to these authors besides orthoclase and nephelite, an amphibole of arfvedsonite group, a lapidumelane, some sodalite and cancrinite and a probably new mineral. All these minerals are entirely absent in the Maomaokou specimen.

#### HAÜYNITE-SYENITE PORPHYRY OF LING FENG HSIEN, SHANSI

*L. F. Yih*

Presented with charts.

The full paper will be published in the bulletin

#### THE PHYSIOGRAPHICAL HISTORY OF THE YELLOW RIVER BETWEEN SHANSI AND SHENSI

*C. C. Wang*

Presented with notes and maps.

Discussed by Dr. Andersson and Prof. George B. Barbour, and replied by the author.

#### PRESIDENTIAL ADDRESS AND PUBLIC LECTURE

Presidential Address and public lecture were given in the large lecture hall of the second compound of the National University, Ma Shin Miao, at 8:15 p. m. January 4. The Dean, Mr. L. Wang, was the Chairman.

<sup>‡</sup> In his text, Leclère mentions that his nephelite syenite comes from east of Huei Li district. Dr. Ting points out to me that it must come from the west of this district. A study of Leclère's itinerary confirms Dr. Ting's remark.

In 1922 when I passed over Prof. Lacroix's laboratory in Paris, he kindly showed me Leclère's specimen which he has studied. The specimen appeared to me to be a river pebble rather than found *in situ*. Subsequently Prof. Lacroix has communicated to me the complete analysis of the nephelite syenite which is reproduced in the following. To this eminent petrographer, I express herewith my best thanks.

SiO <sub>2</sub>	56.28	FeO	2.05	Na <sub>2</sub> O	9.91	P <sub>2</sub> O <sub>5</sub>	5	Cl	0.26
Al <sub>2</sub> O <sub>3</sub>	21.84	MgO	0.29	K <sub>2</sub> O	4.53	H <sub>2</sub> O	0.61+	SO <sub>3</sub>	0.95
Fe <sub>2</sub> O <sub>3</sub>	3.36	CaO	0.88	TiO <sub>2</sub>	0.5		0.14		

100.25



PRESIDENTIAL ADDRESS GIVEN IN CHINESE: 理論的地質學與實用的地質學  
(THEORETICAL GEOLOGY AND APPLIED GEOLOGY)

*W. H. Wong*

PUBLIC LECTURE: MISUNDERSTOOD FACTORS OF ORGANIC EVOLUTION

*A. W. Grabau*

Given in English and interpreted by the Secretary. This address has already been published in a small pamphlet by the Peking Leader.

RECEPTION BY THE GEOLOGICAL INSTITUTE OF THE  
NATIONAL UNIVERSITY OF PEKING.

After the presidential address and the public lecture a reception was especially given for the members of the Society and their guests in the Dinning Hall of the University, and the three new fellows, Messrs. Admiral T. K. Tsai, K. P. King, and S. J. King, were introduced to the members of the Geological Institute of the National University of Peking by Prof. J. S. Lee. Each of the new members made a short address.

AFTERNOON SESSION OF MONDAY, JANUARY 5.

PRESIDENT W. H. WONG IN THE CHAIR

The meeting was reconvened at 2 o'clock and the following papers were presented and discussed.

THE FOSSIL FLORA OF THE COAL-BEARING SERIES AT MULIN  
HSIEN, KIRIN PROVINCE

*Edward Ahnert*

Presented with maps and specimens.

The full paper will be published in the bulletin.

FUSULINA AS A ZONING FOSSIL

*J. S. Lee*

Presented with notes and a large number of thin sections thrown upon the screen by means of projectorscope.

The full paper will be published in the bulletin.

CARBONIFEROUS STRATIGRAPHY IN N.W. KANSU

*P. L. Yuan*

Presented with notes, sections and selected specimens.

A preliminary note will be published in the bulletin.