

PROCEEDINGS OF THE NINTH ANNUAL MEETING OF
GEOLOGICAL SOCIETY OF CHINA, HELD IN PEIPING AT
THE LIBRARY OF THE NATIONAL GEOLOGICAL
SURVEY ON OCTOBER 5, 6, 7, 8, 9, 1932.

Morning Session of Wednesday 5 Oct.

The first meeting was called at 9.30 A.M. by President W. H. Wong who made the following remark.

"Although this meeting is called the 9th Annual Meeting, we are in reality already on the 11th year since the founding of this Society in 1922. We have thus completed the first decade in the Society's history and it is indeed a great pleasure for me to take profit of this occasion to make a brief review of the progress of our work and the growth of our association. The Society started with 26 charter members and had its first meeting in this same room on Jan. 27, 1922. The membership of the Society has now grown to 254 as counted from the list printed at the end of the last Bulletin Vol. XI, No. 4. Thus the membership has grown ten times during the last ten years.

"The Society has now two honorary members Prof. Lacroix of France and Dr. Osborn of the United States of America. We have elected 26 corresponding members among whom it is a regret to record the death of W. D. Matthew, and J. W. Gregory. To all the honorary and corresponding members, our Bulletin has been regularly sent.

"Reading, discussion and publication of scientific papers have been the main functions of the Society. And our publication has rapidly grown both in scientific standard and in the number of pages printed. Indeed the size of our annual publication increased from 99 pages in the Bull. Vol. I to 492 pages in the Bull. Vol. XI. The total number of scientific papers published is 234 not including those read by titles and given in abstracts. The editorial work was done first by Mr. Liang F. Yih for the first five years and from the sixth year up to the present by myself with the assistance of Mr. Yih himself first and Mr. T. C. Chow for the last four years. The Bulletin was issued in one single

number in 1922, in two numbers in 1923, in three numbers from 1924 to 1928, and in four quarterly numbers since 1929.

"The Society has founded a gold medal, the Grabau Medal, in 1925 through a donation by one of our past presidents Mr. C. Y. Wang. The recipients of this medal biannually awarded for important accomplishment in Chinese geology and paleontology were Dr. A. W. Grabau on whose honor the medal was named in 1925, Prof. J. S. Lee in 1927 and Dr. Davidson Black in 1929.

"After the deeply regretted death of the late Mr. Y. T. Chao in Nov. 1929 a special fund of \$17,221 silver was raised to found the Chao Memorial Research Fellowship. The first fellowship amounting to \$1,200 was awarded in 1932 to Mr. T. K. Huang by the joint decision of the Council and the Fellowship Administration Committee taken on 18th May 1932. It is expected that about the same amount will be available every year to be awarded by the Society for the promotion of research work.

"The Society receives a good number of publications through exchange with its bulletin. Those publications are now placed in the Library of the Geological Survey, and kept in the same series for facility of reference although recorded in independent accession books in such a way that it will be possible to separate out the Society's property when so should be decided. Since 1924 the Society has tried to constitute a "Book Purchase Fund." The total fund raised was \$4,250, the names of the donors have been recorded in the bulletin. Of this only a small amount has been spent. With the accumulated interest of fixed deposit of this Library fund and together with the Grabau Medal Fund originally amounting to \$600 and the income from the life membership dues, we have now a total balance of \$7,236. in fixed deposit in the National Commercial Bank.

"With the books now possessed by the Society and a great collection of geological and paleontological literature which one of our members promised to donate to the Society, Dr. V. K. Ting has proposed to raise necessary fund for building a special library for the Society itself to be situated *near the Survey Library*. And he has now already succeeded to obtain \$6,000. It is hoped that further contribution will soon come so as to make practicable the proposed scheme.

"The increased activity of the Society involves increased responsibility on the part of the officers. The successful record of the past decade in the Society's history, and the appreciative and helpful attitude of many friends toward our work and organization encourage us to pursue our activity for the further development of geological and related research in this country. However the task of upholding the tradition and achieving new progress will chiefly fall upon younger members of the Society. The management of the Society's business can not remain for ever in a few hands. It is important for members of the Society to choose in electing the new members of the Council those who are really interested in and capable of the Society's management. And it is still more important that those who are elected be conscious of their responsibility in continuing the good work started in the past ten years and conduct in the right direction the Society's activity in the pursuance of its object: the advancement of geology and allied sciences in China."

On behalf of the Council, Dr. W. H. Wong continues to report on the result of the new election of Prof. J. S. Lee and Dr. C. C. Young to succeed Messrs. H. T. Chang and W. H. Wong in the new Council for the year 1932-1933. A special meeting of the new Council was held at 9 o'clock morning Oct. 5 at which Prof. J. S. Lee was elected President of the New Council and Drs. Y. C. Sun and C. C. Young respectively Secretary and Treasurer. The new council is thus composed of the following members:

理事長	李四光	J. S. Lee President for 1932-1933.
書記	孫雲鑄	Y. C. Sun Secretary for 1932-1933.
會計	楊鍾健	C. C. Young Treasurer for 1932-1933.
理事	丁文江	V. K. Ting Councillor
理事	朱家驊	C. H. Chu Councillor
理事	翁文灝	W. H. Wong Councillor
理事	葛利普	A. W. Grabau Councillor
理事	葉良輔	L. F. Yih Councillor
理事	謝家榮	C. Y. Hsieh Councillor

The terms of the members of the Council are as follows:

V. K. Ting (past president) term expires in 1933

C. H. Chu (past president) term expires in 1934
 W. H. Wong (past president) term expires in 1935
 A. W. Grabau term expires in 1933
 L. F. Yih term expires in 1933
 C. Y. Hsieh term expires in 1934
 Y. C. Sun term expires in 1934
 J. S. Lee term expires in 1935
 C. C. Young term expires in 1935

The Council also elected or reelected the following:

Assistant Secretary: Y. S. Chi
 Assistant Treasurer: S. C. Chien
 (also as librarian)
 Board of editors: Chairman: W. H. Wong
 Assistant editor: T. C. Chow
 Assistant editor: T. H. Yin.

In order to remember the composition of the existing committees the following lists are here added.

Committee for the Grabau Medal.

Constituted in 1925

H. T. Chang, V. K. Ting, W. H. Wong, C. Y. Wang, J. S. Lee,
 and A. W. Grabau.

Committee for the Library Fund

(Constituted in 1924)

V. K. Ting, C. Y. Wang, J. S. Lee, H. T. Chang and W. H. Wong.

Committee for the Chao Memorial Fellowship Fund.

(Constituted in 1930)

MEMBERS: H. T. Chang, V. K. Ting, W. H. Wong, C. Y. Wang,
 J. S. Lee, C. H. Chu, Lieh Wang., A. W. Grabau, L. F. Yih,
 Y. C. Sun.

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EXECUTIVE MEMBERS: V. K. Ting, C. H. Chu, J. S. Lee, W. H. Wong, Sohtsu G. King, K. H. Hsu.

Report of the Treasurer.

To the Council and members of the Geological Society of China, the Treasurer begs to submit the following report of the finances of the Society for the period April 21, 1931—Sept. 30, 1932.

RECEIPTS (April 21, 1931—Sept. 30, 1932)

1. Balance credit on April 18, 1931	\$ 875.52
2. Valueless bonds & bank notes	\$ 55.00
3. Life membership dues (18 members)	\$ 900.00
4. Membership dues (108 members & 20 associates)	\$ 580.00
5. Sale of Bulletins	\$1,031.30
6. Contributions from Ministry of Education for 8th Annual Meeting	\$ 800.00
7. Contributions from National Central University for 8th Annual Meeting	\$ 800.00
8. Contributions from Geol. Survey of Liang-Kwang for 8th Annual Meeting	\$ 400.00
9. Contributions from National Geological Survey (Jan.—Dec. 1931 to June 1932)	\$ 900.00
10. Contributions from Tsing Hua University (for Grabau Anniversary Volume)	\$ 600.00
11. Contributions from National University of Peking (1931)	\$ 400.00
12. Contributions from National Research Institute of Geology (March-August, 1931, July-August, 1932)	\$ 420.00
13. Library fund	\$ 100.48
14. Interest	\$ 43.85
Total	\$7,906.15

EXPENDITURE (April 21, 1931—Sept. 30, 1932)

1. Printing bulletins Vol. 9, No. 4, No. 11, Nos. 1-4 (No. 4, paid partly)	\$2,136.62
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2.	Printing Grabau's Anniversary Volume Bulletin Vol. 10.	\$2,310.00
3.	2 Grabau's medals with mould	\$ 665.90
4.	Total Expenses (miscellaneous) for 8th Annual Meeting . . .	\$ 411.96
5.	Travelling Expenses for 8th Annual Meetings	\$1,006.00
	(5 Peiping members \$82.00 each, Total \$410.00; 3 Associates of Peking University \$12.00 each, total \$36.00; 3 Canton members \$112.00 each, total \$336.00; 7 Shanghai members, \$32.00 each, total \$224.00)	
6.	Postages	\$ 508.15
7.	Binding bulletins	\$ 48.50
8.	Salary for Assistant Treasurer (1931)	\$ 100.00
9.	Salary for Assistant Secretary (1931)	\$ 60.00
10.	Administration	\$ 224.02
11.	Miscellaneous	\$ 35.86
		<hr/>
		\$7,507.01
		<hr/>
	Total Expenditure	\$7,507.01
	Balance credit	\$ 399.14
		<hr/>
		\$7,906.15
		<hr/>
	Cash on hand Sept. 30, 1932	\$344.14
	Valueless bonds & bank notes	\$ 55.00
		<hr/>
		\$399.14
		<hr/>

S. C. Chien (signed)
Assistant Treasurer
Oct. 1, 1932.

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Report on the Permanent Funds of the Society.

(The Library fund, the Grabau Medal fund and Life membership dues)

Balance in Aug. 1931 \$6,700.00

Interest in Aug. 1932 \$ 536.00

\$7,236.00

W. H. Wong, S. C. Chien
(signed) (signed)

Report on the Additional Library Fund.

Received from

Donation of Mr. P. S. Wang 汪卜桑 \$2,000

Donation of Mr. W. S. Yang 楊曙山 \$2,000

Donation of Mr. Y. S. Chu 竹堯生 \$1,000

Donation of Mr. Y. C. Cheng 陳永清 \$1,000

Total \$6,000

W. H. Wong, S. C. Chien
(signed) (signed)

Report of the Secretary.

To the Council and the Members of the Geological Society:

Secretaryship:—During the absence of the Secretary, Dr. Y. C. Sun, from May up to September the duties of the office were discharged by Mr. Y. S. Chi, Assistant Secretary.

Meetings:—During the year past this Society has held one special meeting on Monday May 30th, in the Library Building of the Geological Survey of China, Peiping, President Dr. W. H. Wong in the chair. The speakers were Prof. P. L. Yuan, on "Palaeontological Research in Sinkiang", illustrated with many lantern slides, and Mr. Y. L. Wang, "On the Geological Structure of Yunnan", with Geological maps and sections.

Membership:—Our membership has grown very steadily within the last ten years. The present enrollment of the Society is as follows:

Members	...	...	...	...	...	...	...	210
Charter members	.	...	...	...	...	...	...	26
Life members	...	...	...	...	...	...	...	38
Deceased members	...	...	...	...	...	...	...	2
Associates	...	...	...	...	...	...	...	44
Deceased associate	...	...	...	...	...	...	...	1
Honorary members	2
Corresponding members	26
Deceased corresponding members	2
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Total members and associates	282
Total deceased members and associates	5

Obituary: We regret to learn from "Nature" (Vol. 129, No. 3269, p. 930, June, 1932) that the distinguished geologist, Professor John Walter Gregory, one of our corresponding members, while studying the structure geology of the High Andes in Northern Peru was drowned in the Urumbamba River.

The Society has lost one member, Mr. C. O. Chen of the National Central University, Nanking.

Respectfully submitted,

Yungshen S. Chi
(signed)
Assistant Secretary
Sept. 29th, 1932.

Report of the Board of Editors.

In accordance with the decisions taken at the Eighth Annual Meeting in May 1931 in Nanking, the Society has published its Bulletin Vol. X as a special issue in commemoration of the 60th birth day of Dr. A. W. Grabau which happily coincides with his 10th year of teaching and research work in China.

This volume has now been published, containing a biographical note of Dr. Grabau and 16 scientific papers. The success of that anniversary volume is chiefly due to the energetic leadership of Dr. V. K. Ting in the work of editing. As the Grabau Volume was numbered Vol. X for the year 1931, and in order to have the publication of the Bulletin better correspond with the period of activity of the Society which was changed from the calendar year (Jan.-Dec.) to the fiscal year (July-June) since the last Annual Meeting in Nanking, it was decided to publish the Vol. XI for the year 1931-1932. Thus in the future all volumes will correspond to the fiscal years.

The Vol. XI of our Bulletin is now already completed and ready for distribution to members before the present Annual Meeting. It is a pleasure to record that the bulletin is rapidly growing in pages (from 99 pp. in Vol. I to over 490 pp. in Vol. XI) showing the increasing geological activity in this country. The Vol. XI contains altogether 38 papers of high scientific interest. They may be broadly classified as follows:

Subject	Mineralogy	Petrography	Palaeontology	Stratigraphy	Tectonics
Papers	1	4	11	5	4
		Physiography	Fossil man		
		4	8		

The papers were mainly contributed from the National Geological Survey at Peiping (18), the Kwangtung and Kwangsi Geological Survey at Canton (7), the Geological Department of the Peking National University (4), the Fan Memorial Biological Institute (3) and other workers. The Society is grateful to all these institutions and workers for their important contributions published in this Bulletin. Among these, particular mention should be made of the Cenozoic Research Laboratory of the Geological Survey whose epoch-making discoveries of *Sinanthropus* and associated materials are all recorded in the Bulletin of the Geological Society. Several interesting papers on the coal petrography came from the Sinyuan fuel laboratory of the same institution.

It is the hope of the editors to make this Bulletin as representative as possible of the geological work in different parts of China. It seems very desirable from several points of view to maintain this Bulletin for publishing the

main discoveries or investigations of scientific significance in this country while more detailed and elaborated reports are being printed by different government and private institutions. The recent constitution of Chinese Societies of physics and chemistry along the similar lines as our Society confirms the useful purpose served by such national organization which aims at the promotion of cooperation between the workers in different institutions. It is a pleasure to record that the Geological Society has led in this way since already eleven years and the eleven volumes of its Bulletin constitute the best testimony of the always growing activity and friendly spirit of cooperation of all its members including the foreign scientists working in this country.

For all the last three volumes the text printing of the Bulletin has been done throughout all the succeeding numbers by the San Yu Press and the helio-type plates by the Kukung Press, both in Peiping. The editors regret that it has not been possible to always insure the desirable uniformity in the cover of the quarterly numbers, but it is understood that the numbers are to be bound in volumes.

As has been repeatedly mentioned on the previous reports, particular thanks are due to Mr. T. C. Chow who as assistant editor has done again during the last year practically all the editorial work. Mr. Chow has always done this difficult work for the Society entirely unremunerated, thus the Society owes him a great debt of gratitude for his efficient service and spirit of sacrifice.

W. H. Wong
Chief Editor

20th Sept. 1932, Peiping.

The last business was the revision of the constitution.

Proposed Amendment to Constitution

- Art. III. The membership of the Society shall consist of members, associates, corresponding members, honorary members, and institution or corporation members.
- E. As institution or corporation members, any institutions or corporations which are interested in geological and its allied sciences.

Art. V. Institution or corporation members can cast one vote each.

Art. XIV. Institution and corporation members shall pay a due not less than four hundred dollars a year.

Signatures: V. K. Ting, W. H. Wong, A. W. Grabau, C. Y. Hsieh, Y. C. Sun, K. H. Hsu and Y. S. Chi.

第三條 本會會員分爲下列五種

戊 機關或團體對於地質學或其他與地質學有關係之科學有興趣者得爲本會機關或團體會員

第五條 機關或團體會員得有一總選舉權

第十四條 機關或團體會員每年須至少納會費四百元

The above proposal was unanimously carried.

In consequence of the inclusion of the "Institution or corporation members", the Chairman proposed that they should have the right to receive three copies each of the bulletin of the Society instead of only one copy as in the case of the individual members. A resolution was so adopted and the Librarian will act accordingly.

In closing the chairman remarked that good precedent has been created in the last Annual Meeting in Nanking by organizing excursions. This tradition is being followed this year with the organization of four excursions as follows:

Excursion A to Mentoukou & Sanchiatien to be led by Y. S. Chi.

Excursion B to Nankou & Chuyunkuan to be led by C. S. Kao.

Excursion C to Chiufeng Seismic Station to be led by W. H. Wong or K. H. Hsu, and received at the Station by S. P. Lee.

Excursion D to Choukoutien Sinanthropus Site to be led by C. C. Young and W. C. Pei.

The meeting was reconvened at 2 P. M. Before calling upon reading of papers, the Chairman Dr. W. H. Wong introduced Dr. C. T. Yen (嚴濟慈) of the Physical Institute of the National Academy of Peiping to make a demonstration of the detection of radio-active minerals by his electroscope, which was received with acclamation by members. Then the following papers were read.

1. On the Salt and Oil Deposits of Szechuan Basin, By H. C. Tan.
2. On the Oil Horizons of N. Shensi, By C. C. Wang.
3. On the Stratigraphy of the Mesozoic Formations of Szechuan and its bearing on Structure Geology, By C. Y. Lee.
4. Notes on the Geomorphology of N. Shensi, By C. Y. Hsieh.
5. Der Nord-Süd-Canonlauf des Hwangho, By Günther Köhler. (By title)
6. On the Mesozoic Flora of Southern Shensi and Kweichow, By H. C. Sze (By title).
7. On the Age of Shensi Formation, By C. H. Pan (By title).
8. On some Neolithic (and probably Palaeolithic) finds in Mongolia, Sinkiang and West China, By Teilhard de Chardin and C. C. Young.
9. Glaciers of Bogdo Ula in Sinkiang, By P. L. Yuan shown with many beautiful photos shown in projection.

After the papers of Messrs. H. C. Tan and C. C. Wang, a discussion took place on the age of the oil bearing horizons in Szechuan and Shensi to which participated V. K. Ting, A. W. Grabau and C. Y. Hsieh, Dr. Ting was of the opinion that the oil and salt in Szechuan were probably originated from the Triassic sandstone which contains salt also in Yunnan. He rather doubted the explanation proposed by Mr. H. C. Tan that the oil was originated in Cretaceous and Jurassic beds and penetrated afterwards into lower formations. Prof. Hsieh pointed out however that in Shensi oil always occurs in the Jurassic formations and no trace has ever been found in the Triassic red and green shales and sandstone.

Annual Dinner on Wednesday evening, Oct. 5.

At the Annual Dinner at the Western Returned Students Club, 53 members and guests were present. At the end of the dinner, President Wong after a brief remark called upon Drs. Hu Shih, A. W. Grabau and Parejas to speak. A group photo was taken with magnesium light.

Public lecture Oct. 6th Morning.

A public lecture was given at 10 A. M. in the Geological Survey Library by Prof. Edouards A. Parejas which had as subject "*One hour in the heart of the Alps*" illustrated with a great number of tectonic diagrams and photographs. The lecture was attended by about 80 members and University students.

Afternoon session of Thursday Oct. 6th.

The meeting was reconvened at 2 P. M. and the following communications were made.

1. The Interpretation of the Ordovician and Silurian in the light of Recent Investigations, By A. W. Grabau.
2. On the Occurrence of *Cruziana* (Bilobites) in Yunnan and Szechuan, By T. H. Yin
3. The Late Cenozoic Formations of S. E. Shansi, By Teilhard de Chardin and C. C. Young.
4. Notes on *Calceola sandalina* and a New Variety from Shuimokou, N. W. Szechuan, in China, By Y. S. Chi.
5. A beautiful Plasmoporoid Coral from Fengchu Shale of Lower Silurian in S. W. Chekiang, By S. S. Yuh (By title).
6. On the Validity of the Genus *Maginifera* Waagen, By T. K. Huang (By title).

7. Notes on the Hiatus between the Ichang Limestone and the Neichia Formation, By C. C. Yu (By title).
8. A Permian Section of Dzungaria, By P. L. Yuan (By title).

In the discussion following the reading of the papers Dr. Grabau raised the question that the *Cruziana* would be the mould of animal trails and thus should be found on the lower surface of strata, it is therefore difficult to understand that the specimen from north Yunnan was collected from upper surface of the Silurian strata as reported by Mr. Y. L. Wang who made the collection.

After the reading of Mr. Y. S. Chi's paper on the *Calceola Sandalina*, Dr. Grabau congratulated the author for his systematic research of this interesting species.

Morning Session of Friday Oct. 7th.

The session was devoted chiefly to the reading and discussion on the mineralogical and petrographic papers.

1. The Wolframite and Cassiterite Deposit at Chinchuantang, Chenhsien, Hunan Province, By H. S. Wang.
2. Preliminary Report on Iron Ore of Peiyin Obo, Suiyuan, By T. H. Ting.
3. Some Notes on the Precious Stone Deposits of Suiyuan Province, By C. C. Sun.
4. On the Twinning of the Plagioclase Feldspar, By T. L. Ho.
5. Origin of the Truncated Pebbles from Yinkang Valley, Tatung, Shansi, By K. L. Feng.
6. Geology and Fossil Wood of Shiachiakou, Huailaihsien, Chahar, By S. W. Wang (In Chinese).
7. Sand Dunes and Rock Waste in Mongolia, By P. L. Yuan.
8. 桑津—石斧爲中國原始貨幣考 (By title)
9. Is Chihsia Limestone really developed in Kwangtung and Kwangsi Provinces? By S. S. Yoh (By title).
10. On the New Discovery of the Graptolite Shale from Lientan, Yutan, Yunan District in Kwangtung Province and the Correlation of its stratigraphic position, By H. C. Chang (By title).

11. Notes on the geology of Leichow peninsula, Kwangtung, By R. L. Pendleton (By title).

A long discussion took place after Mr. H. S. Wang's communication in which he described the occurrence of fluorite, topaz and the metalliferous minerals in the quartz veins. Prof. Hsieh questioned whether these minerals chiefly the wolframite and cassiterite could be of later formation than the quartz while Mr. H. S. Wang maintained that the quartz at least in the central part of the vein is of later formation. Prof. K. L. Feng expressed his opinion in favor of Mr. Wang.

Among the specimens of pebbles from Tatung shown to the meeting by Prof. Feng, Dr. C. C. Young recognized one which has been worked by man's hands.

Afternoon Session of Friday Oct. 7th.

The meeting was started punctually at 2 P. M. and the following papers were communicated:

1. Some structural features recorded in the Tsingtao Granite (Shantung), By Edouard A. Parejas.
2. Microstructure of some Chinese anthracite, By C. Y. Hsieh with lantern slides.
3. Geology of Ningan District with special reference to the origin of Chingpohu and Tiaoshuilou falls, By T. H. Yin.
4. On the Silurian of Eastern Yunnan, By Y. L. Wang.
5. Alkaline intrusives of Lutingshan and Ch'iaoshan in S. Shansi, By E. T. Nyström and S. L. Tsao.
6. On Permian formations of Southern China, By T. K. Huang (By title).
7. Geology of West-Lake, Hangchow, Chekiang, By H. T. Lee (By title).
8. The pyrite deposit in Shuikoushan, Changning District, Hunan Province, By H. S. Wang (By title)
9. Rich Dinosaur strata of Sinkiang, By P. L. Yuan.

Mr. Hsieh was congratulated for his successful application of the polarized light microscope for the examination of the anthracite of which the intimate structure could not be revealed otherwise.

Discussion took place on Mr. Y. L. Wang's paper in which Dr. V. K. Ting explained the error he made in his former study of the Mientien area due to the overlook of a slight folding of the strata and mixing up of fossils.

The last communication was made by Prof. P. L. Yuan on his discovery of a large number of dinosaurian skeletons some of which are quite complete as he shew with his sketches made in the field. He found also dinosaur eggs in the same formation in Tienshan. The chairman congratulated Prof. Yuan for his very important discovery and painstaking work in the collection.

The meeting was adjourned at 6 P. M.

Brief Account of Excursions.

Excursion A led by Mr. Y. S. Chi: — On Saturday morning, October 8, participants in the excursion A went to Sanchiatien, Western Hills of Peiping by the Peiping-Mentoukou Branch Railway. Twenty three members joined that trip, including Dr. T. H. Yin, Messrs. C. Y. Hsieh, C. Y. Lee, Y. L. Wang of the Geological Survey of China, Father Licent of the Hwang Ho Pei Ho Museum, six students of the Peking National University, and eleven students of the Peiping Normal University. The party at first studied the well-exposed section along the west bank of the Hunho River, much interest was aroused in the syncline of the Chiulungshan Formation and the contact with the underlying Liassic Mentoukou Coal Series, especially in the slickensides of the tear fault in north-south direction along the Mentoukou-Chaitang Railway, north of Chengtzetsun village. Then they went to the northern slope of Chiulungshan north of that village. A complete section of the Mentoukou Coal Series which was subdivided into three different sub-series was recognized, fossil plants and fossil wood were collected from a horizon of the middle series. At 4:30 P. M. the participants visited the Mentoukou (Sino-British) Coal Mine at the invitation of the Chief Engineer Mr. Vermaier. The party returned to Peiping by train at 9 o'clock P. M.

Excursion B led by Mr. C. S. Kao: A group of 23 started at 7.00 A. M. Oct. 8 from the Hsichimen station. The train specially made a stop at Chuyungkuan for the excursionists who walked back to Nankou. Special interest was concentrated on the intrusions of the various types in the region. Prof. Parejas pointed out to the constancy of the direction of compression S. E.—N. W. resulting in the schistosity and flattened inclusions in the Chuyungkuan granite all directed at N 70° E. Considerable discussion took place on the nature of the gneissic rock under the Sinian quartzite as observed SE of Tungyuan station. Prof. Parejas suggested that if the gneiss is really of Wutai age, its apparent concordance with the bedding of quartzite may be due to the strength of later tectonic pressure which has changed its original direction. Among the other participants of this excursion, there were Director W. H. Wong, Father Gherzi of Zikawei Observatory, Mr. H. S. Wang of the Geological Survey etc.

Excursion C led by Dr. W. H. Wong and received by Mr. S. P. Lee:— A party of six left the Survey compound by motor car at 7.30 A. M. on 9th Oct. and arrived at Chiufeng at 9.30. The chief geological interest around Chiufeng is the clear exposure of varied facies of the intrusion contact between the granite and the Tiaochishan volcanics. On the lower slopes of the hills numerous inclusions of the tuff and associated bedded rocks are found amidst the granite mass greatly varying in size and in degree of metamorphism. The granite is also traversed by many pegmatitic veins. Near the spring at the mid-height, exposure can be seen of the lit-par-lit injection of granite into the bedded volcanic series resulting in a banded texture which would be typical of a gneiss. Much time was also spent in visiting the seismological apparatus and the recent records of earth-quakes by the Galitzin seismograph. As Father Gherzi was in the party Mr. S. P. Lee took profit of the occasion to ask him technical questions of seismological work.

Excursion D led by Dr. C. C. Young and Mr. W. C. Pei:— Twenty-nine people participated to this excursion. The large party left the west station at 7 A. M. Sunday Oct. 9th. They arrived at Choukoutien at 1 P. M. and spent the afternoon to visit the main Sinanthropus cave and the Kutsetang cave. The next morning was spent on the geological excursions in the surroundings in two groups respectively led by Dr. Young and Mr. Pei. The whole party returned to Peiping at 9 P. M. Monday Oct. 10.