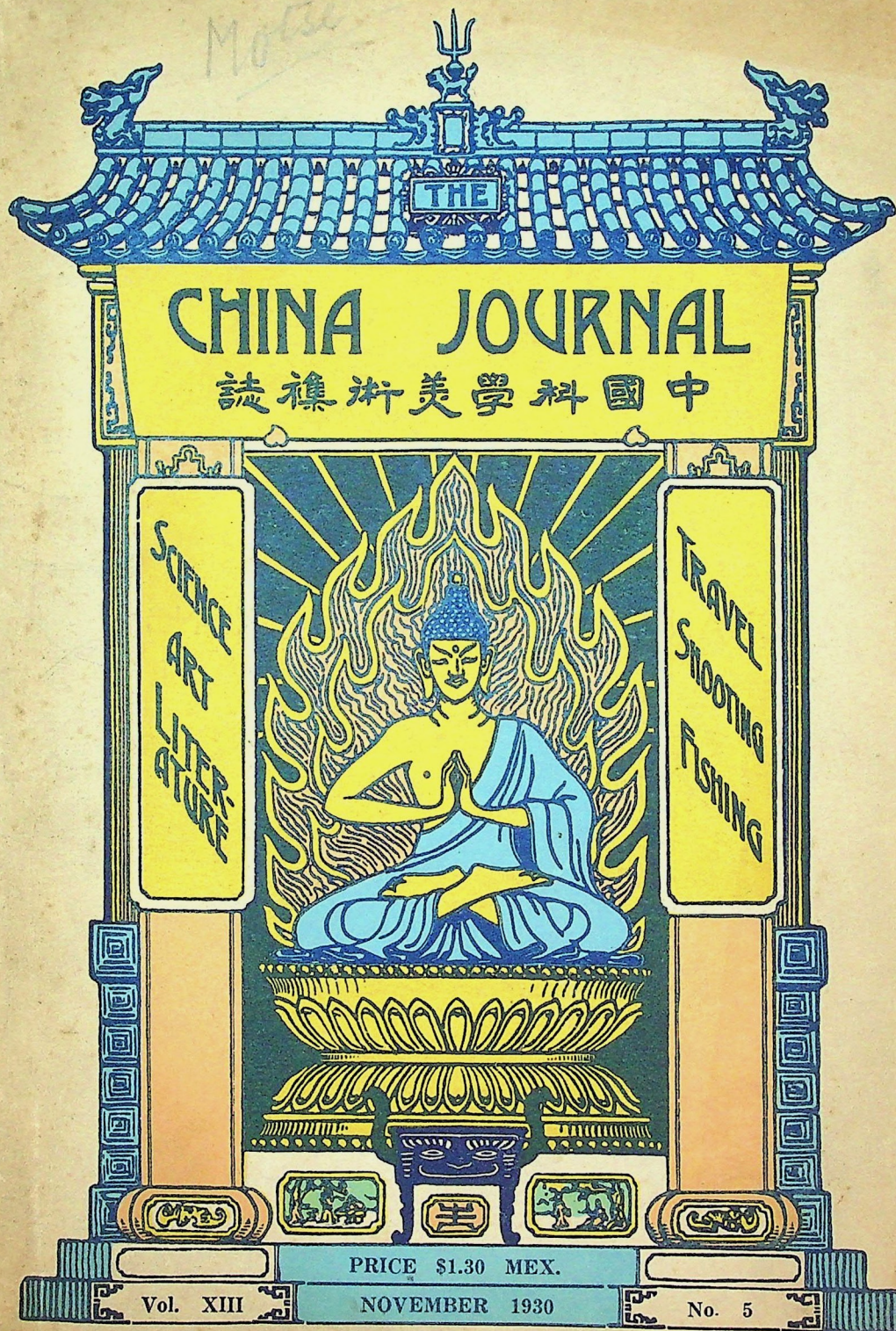




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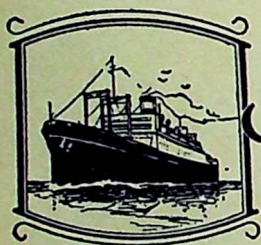
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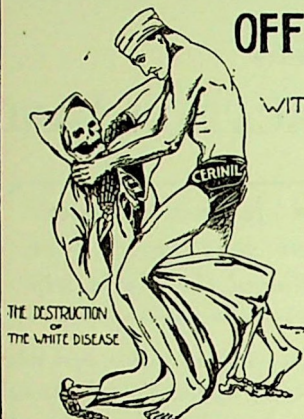
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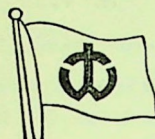
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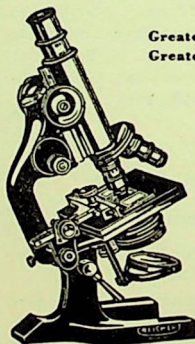
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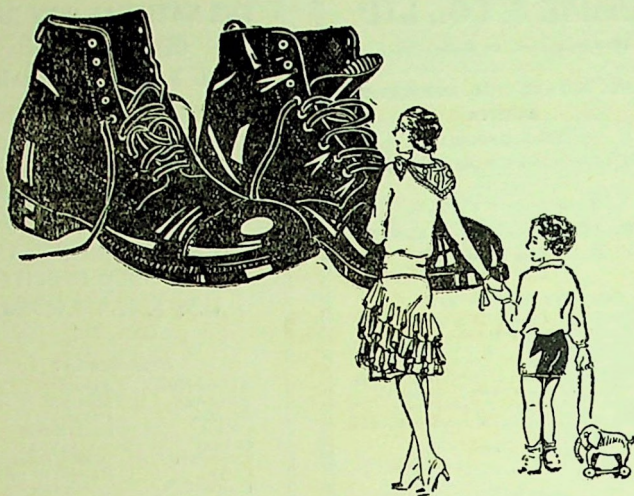
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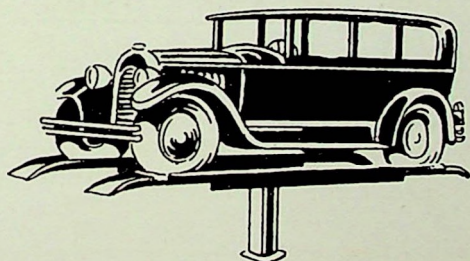
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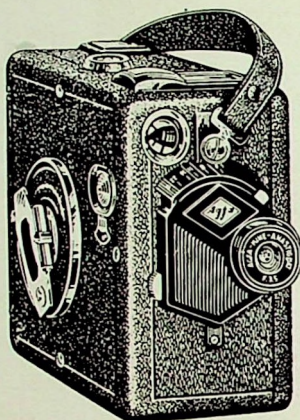
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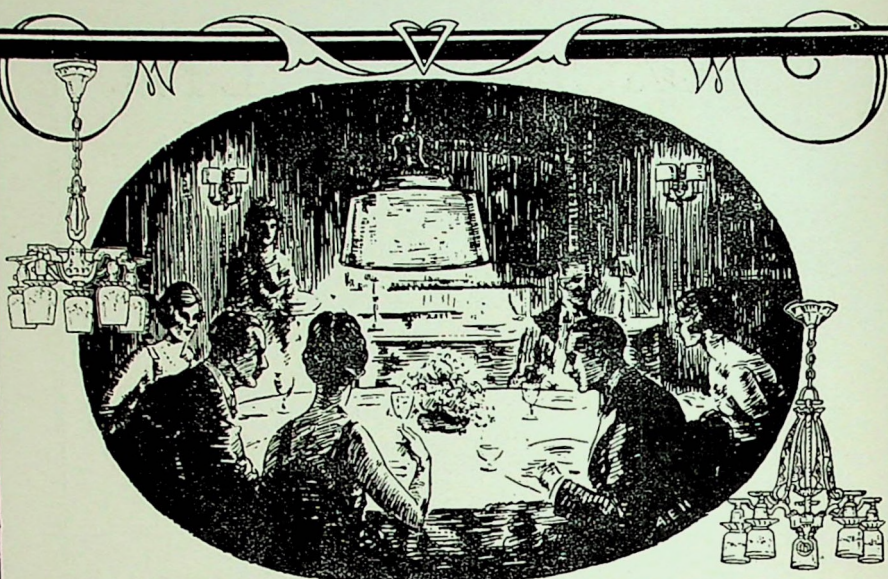
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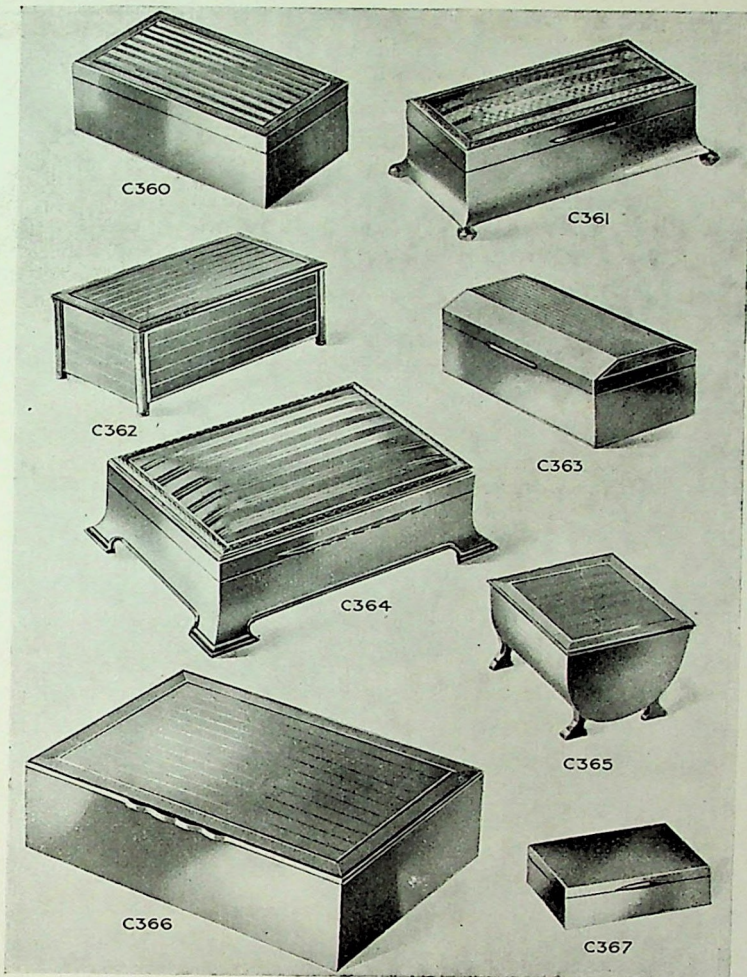
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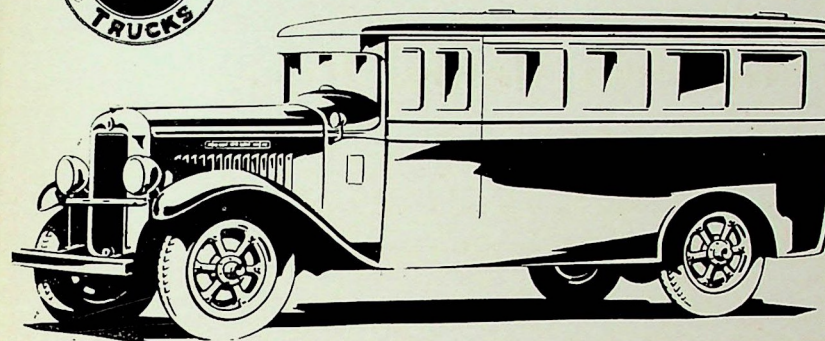
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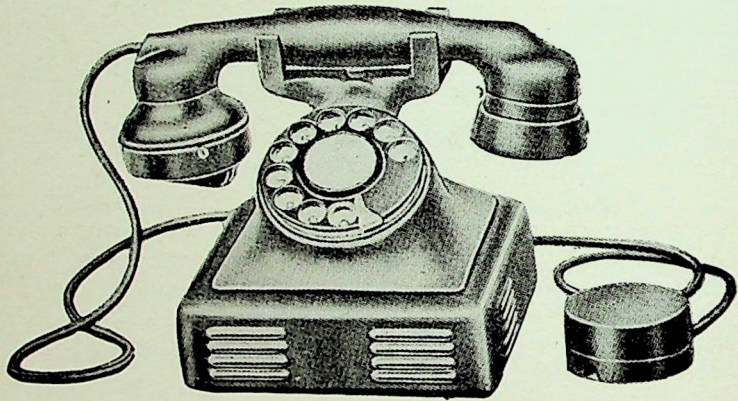
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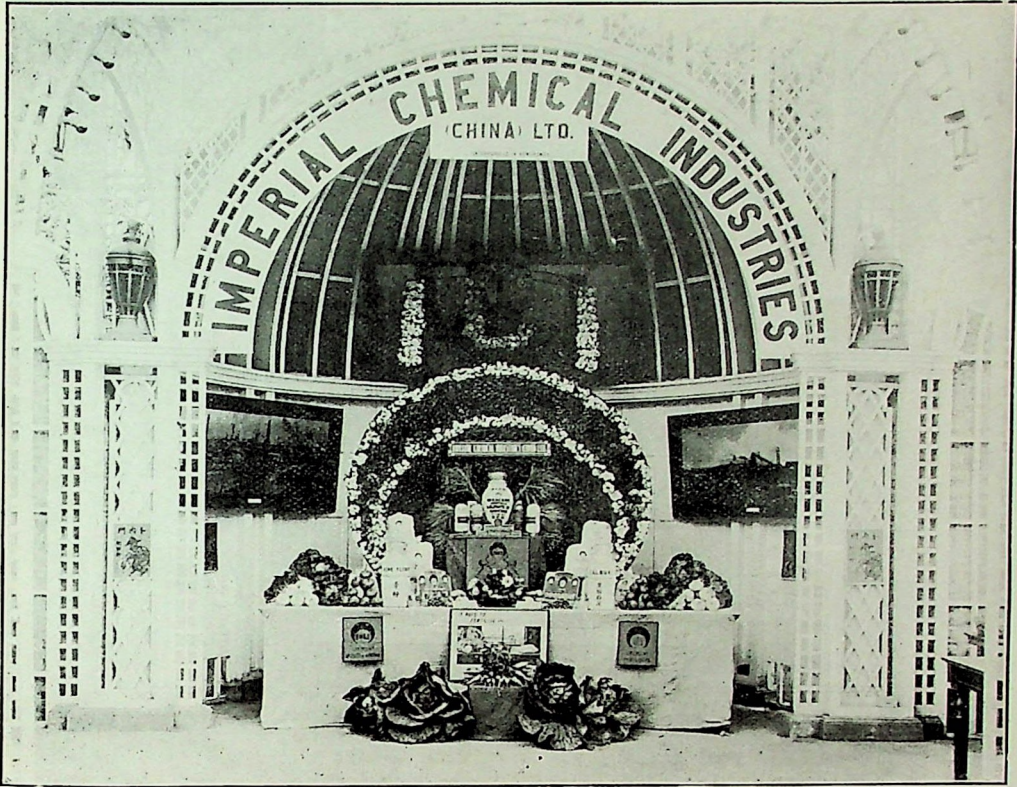
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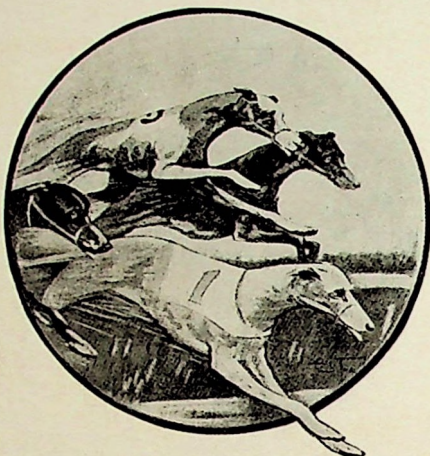
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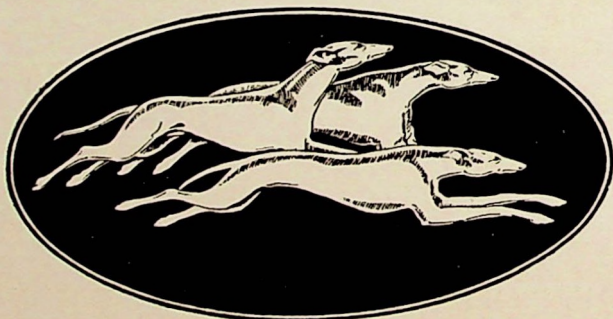
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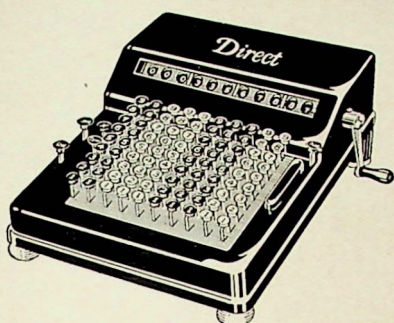
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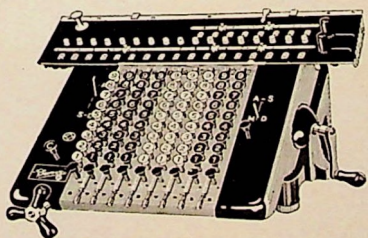


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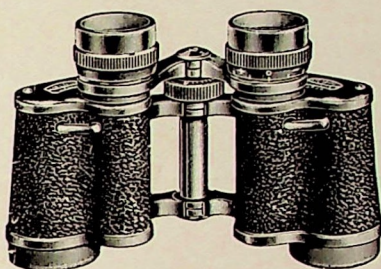
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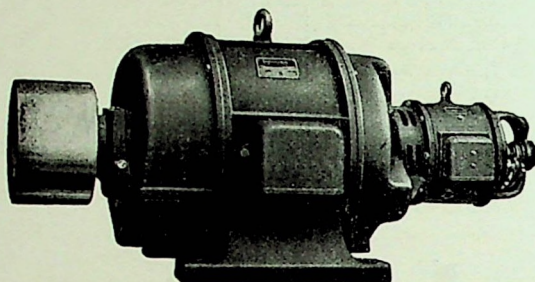
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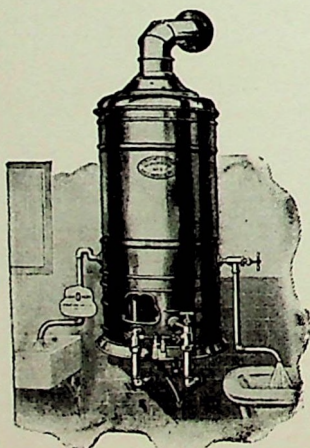


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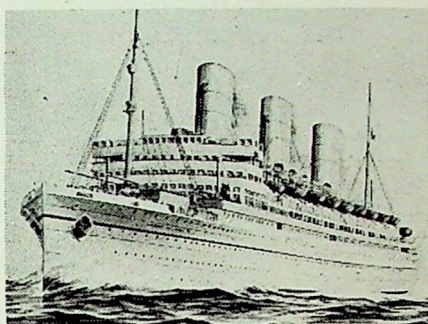
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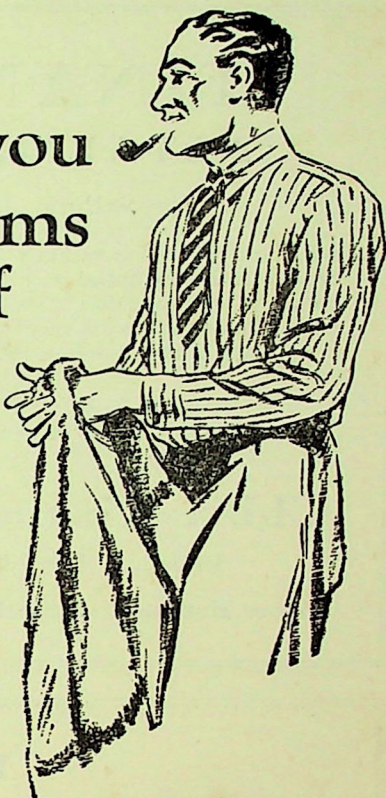
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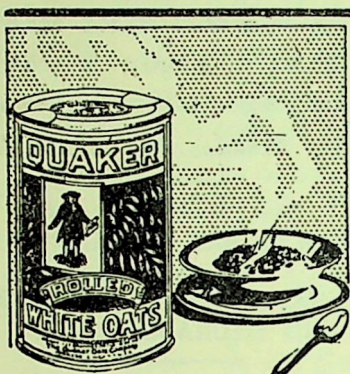
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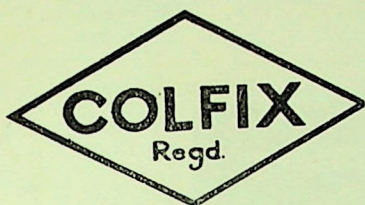
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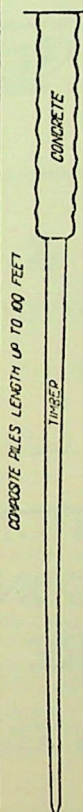
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Contributions of a suitable nature are invited and all manuscripts not accepted for publication will be returned.

Books for review should be sent to the Editor as early as possible.

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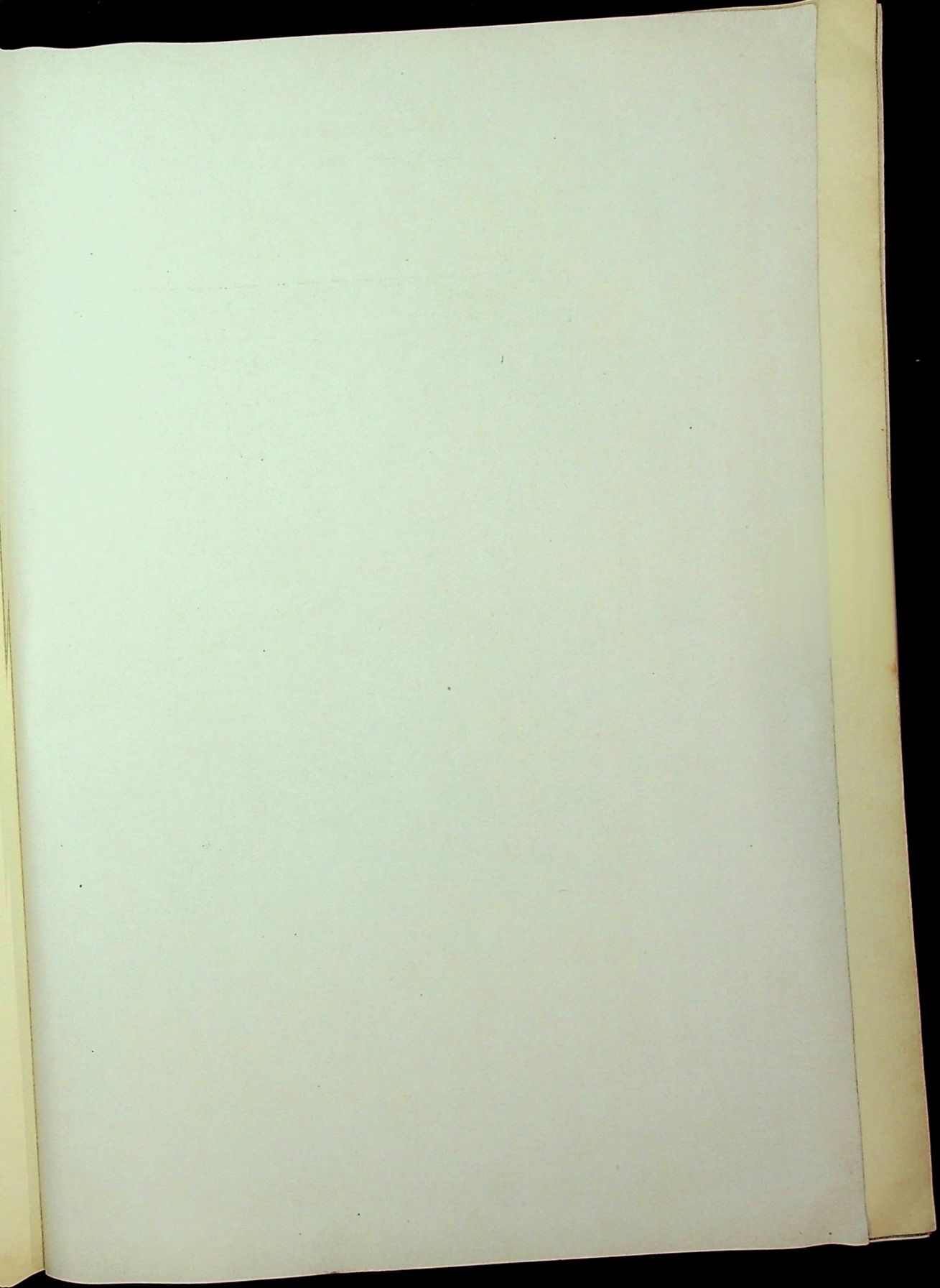
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Professor Grafton Elliott Smith of University College,
London, who has been on a Visit to China to lecture
in Peking and to examine the Remains of Peking Man
(*Sinanthropus pekinensis*).



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NOVEMBER 1930

No. 5

CHINA'S OPPORTUNITY

BY

ARTHUR DE C. SOWERBY

In view of the number of commercial or industrial missions that are visiting China these days, the German in the spring, and the British and the Canadian in the immediate future, it must be patent to the humblest student of world affairs that this country has something very tangible to offer the countries sending them.

Anomalous though it may seem, the very depression that is causing so much distress amongst all classes in Europe and America means that those countries have money to invest and are looking for new channels along which to direct that capital.

This may be explained, in part at least, by the fact that industrial concerns in these countries are paying such low dividends that they no longer form attractive investments to the very large number of people who have a greater or lesser amount of surplus capital; while the recent crashes on the stock markets have made investors somewhat shy of gambling. What they want is something reasonably safe which will bring them in a fairly good dividend, say, from six to eight per cent. Hence financiers are looking about for something to offer such investors, and their attention naturally turns to countries with potentialities of future development. In other words, the financiers, the promoters of stock companies, of Europe and America are examining the possibilities of placing a part of the financial resources of these countries in China for industrial enterprises, and there is no reason to doubt that should they find conditions favourable and the prospect of a reasonable return on their money sound, that money will be forthcoming. This is one phase of the subject: there is another.

The economic depression which is prevalent throughout the world, and which is being especially felt in Europe and America, affecting almost every industry in those countries, particularly the manufacturing industries, can only be overcome by a marked increase in the sales of the articles and goods manufactured. To cut down production as a means of counteracting the falling off in sales must only aggravate the situation further, since it will throw more people out of employment and so tend further to reduce sales. Naturally manufacturers are looking for new markets, and again their gaze, like that of the financiers, falls upon countries such as China where the potentialities of future large markets are obviously great. Since modern commerce is based largely on credits, this means that the manufacturers of Europe and America would probably be willing to give China very considerable credit in the purchasing of goods, providing they were reasonably sure that they were safe in so doing.

Thus, again, because of the economic position of the rest of the world, special opportunities lie before China, if only she is able to take advantage of them.

It may be objected that it will not help China much to become the dumping ground of the excess manufactures of foreign countries at the present high rate of exchange, to which the reply is that China cannot expect to sell to other countries without buying something in exchange, while if industrial development with foreign capital is made to keep pace with commercial development, the rate of exchange will rapidly become more favourable.

In other words, China as a country is faced with an unprecedented opportunity of a rapid industrial and commercial development on exceedingly favourable terms, if only she were in a position to take advantage of it. The unfortunate thing is that at the moment it does not look very much as if she were; a state of affairs due entirely to the internal disorders that rack the country.

After all, it is useless to expect any benefit from the missions that are visiting China, if, when they return to their respective countries, they have to report her to be in a state of chaos. Financiers will not invest money in nor manufacturers give credit to a country that is always in a state of internal upheaval.

We are not concerned with politics in China, believing them mainly to be involved with the personal aggrandizement of individuals or the collective ambitions of parties, and in only a very small way connected with the welfare of the people, but we are very vitally interested in the industrial and commercial development of this great country and the prosperity of its millions of honest, hard working citizens.

We therefore appeal to the leaders of the various factions to have done with their political quarrels, and, instead, to devote themselves and their energies to the establishment of peace and the rehabilitation of China, so as to take advantage of the extremely favourable opportunity that is actually knocking at this country's doors.

THE CHINESE LUNAR CALENDAR

Owing to our having decided to devote the whole of the last issue of *The China Journal* to the Netherlands Indies, our discussion of the old Chinese Lunar Calendar, which has been taking place during the present year, was omitted in that number. We thus have two months, or rather, parts of three Moons, to deal with here, namely, from the 10th day of the 8th Moon, which corresponds to October 1st, to the 11th day of the 10th Moon, which falls on November 30th. During this period no important Chinese date occurs till October 6th, on which day this year falls the Mid-Autumn Festival, or *Chung-chu'u-chieh* (中秋節), also known as the Harvest Festival, one of the three most important festivals of the Chinese Lunar calendar. This festival is celebrated on the 15th day of the 8th Moon, which is also the Moon's birthday, so that the date is of double importance.

The Moon is in apogee about this date, and it is not surprising that the ancient Chinese chose it as the day on which to do honour to this celestial body, which to them was second in importance only to the Sun. The Moon has exercised as much fascination over the Chinese as she has over all other people, and numerous are the legends concerning her and the strange beings supposed to inhabit her. The face we of the West see in the Moon has been translated differently by the Chinese, who see a hare standing under a Cassia tree pounding the Pill of Life or Immortality in a pestel and mortar, while Hêng O, the Lady of the Moon, stands by to swallow the pill. Thus, when, in every home in China, rich or poor, the offerings are made to the Moon on the night of the 15th, consisting of fruits of various kinds and moon-cakes, a gaily coloured picture of the Hare-in-the-Moon, is pasted up behind it.

The moon-cakes are specially prepared for this festival, being sent as presents from friend to friend; and it is said that during the Mongol Dynasty, when a Mongol soldier was quartered on every family in China, a secret message was circulated hidden in these cakes which resulted in the wholesale massacre of the hated Mongols by the people, and the ultimate overthrow of the dynasty.

As with all other peoples, the Harvest Festival is one of great rejoicing with the Chinese, who celebrated it with open air theatricals in the village temples as a thank-offering to the Gods, as well as stilt-walking, processions, performances by lion dancers and the like.

The origin of this festival is, like so many others, lost in antiquity, but it must, of course, have arisen out of the agricultural life of the earliest Chinese societies, marking the period when the communities or groups returned from their sojourn in the fields to their winter quarters in the villages, bringing with them the proceeds of their summer's labour, and offering thanks and sacrifices to the village *Shê*, or Sacred Mound, the emblem, so to speak, of the Earth, from which they derived all their needs, and which alone they worshipped in those early days.

The birthday of Confucius, known as the *Shêng-tan-chieh* (聖誕節) is celebrated on the 27th day of the 8th Moon, which falls on October 18th.

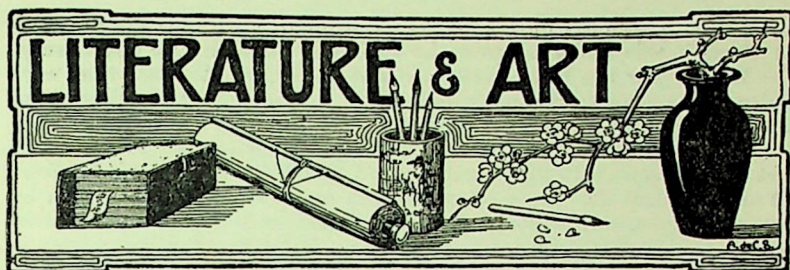
The first day of the 9th Moon this year falls on October 22nd, but it has no special significance. The first important date in this Moon is the 9th, known as the *Chung Yang Chieh*, or *Têng Kao*, which may be translated the Festival of Climbing the Heights. It is celebrated mainly by the gentry and scholars, who picnic in the hills on chrysanthemum wine and cakes.

In South China, especially in Fukien, this day is also celebrated by the flying of kites, which in North China does not take place till after the New Year has been celebrated, and ceases with the advent of spring.

The 11th day of the 9th Moon is the anniversary of Yen Tzu, the favourite disciple of Confucius, while the 15th is devoted to Chu Hsi, the great Chinese philosopher of the twelfth century A.D.

On the 25th day of the 9th Moon, which is on November 15th this year, the birthday of the chief of the City Gods, or *Chêng Huang*, is celebrated, special ceremonies taking place in the temples, one of which is to be found in every city, dedicated to these important deities. These Gods take the place in the cities of the *T'u-ti*, or Tutelary Gods in rural districts, though they rank far higher in the Chinese pantheon than the latter. In times of stress it is to them that the city people appeal, just as the farmers appeal to their *T'u-ti*, and it might almost seem that they are really a relic of the oldest form of religion, Animism, although coming into their present form at a comparatively late date.

As regards the fortnightly periods of the Solar calendar, October 9th, or the 18th day of the 8th Moon, is what is known as the Cold Dew, or *Han-lu* (寒露), while the Descent of Frost, or *Shuang-chiang* (霜降) falls on October 24th, or the 3rd day of the 9th Moon. On November 8th, or the 18th day of the 9th Moon, comes the Beginning of Winter, or *Li-tung* (立冬), and on November 23rd, or the 4th day of the 10th Moon, the Small Snow, or *Hsiao-hsüeh* (小雪).



THE STORY OF THE "MEEN KEAH" OR TIBETAN NUT OF KO-CHOW FU

by

F. A. PERRY

During the reign of Sung Chan, of the Ming Dynasty, which flourished in China from A.D. 1369 to 1644 and was overthrown by the Manchus who were turned out of power by the Republican party in 1911, there lived in the city of Ko-chow Fu (高州府), which is some hundred and sixty miles south-west of Canton in the Province of Kwang Tung, a certain official, by name Lau, who was appointed to office in Tibet. It must be remembered that before the coming of the Revolution no official held office in his own province, as it was feared that in the matter of litigation his judgments would, in all probability, be biased in favour of relations and friends.

Lau's wife and family did not accompany him to Tibet, as the journey was considered too hazardous, but remained in the ancestral home at Ko-chow. A year or two later Lau sent to his wife three nuts which, owing to their peculiar growth and shape, he knew would be looked upon as curios. It may here be mentioned that the Tibetans use these nuts as medicine for any complaints of the eye, soaking them in water and rubbing the eyelid with them.

The careful wife hung the three nuts inside the mosquito-curtain of her bed for safe keeping, but a few days later they were missing. She called her servant and accused her of stealing them, but the servant denied the theft, whereupon the wife flew into a great rage and flogged the poor girl to death. A short while after the three nuts were discovered under the bed beginning to grow, and as the wife was much worried because she had killed her servant, and considered the nuts to be of great value, she had the house removed and the nuts planted in exactly the same spot as the house had stood. One night some evil-minded men dug up two of the nuts that were growing and planted one in Teen Pak (電白) and one outside the East Gate of Ko-chow city. All three nuts

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in course of time grew into large trees, but the one which had been planted where it was found outgrew the two others both in size and beauty.

Every year the trees flower and nuts come, but the two that were stolen produce very few nuts which are of inferior quality to those from the tree growing in Lau's garden.

Before the nuts are gathered, the spirit of the poor servant has first to be appeased, paper money and candles being burnt, crackers let off and meat and cakes offered, which afterwards are to be eaten by Lau's relatives, for, although the official Lau lived over three hundred years ago, his descendants are still living, and when the writer was in Ko-chow he was told that the present Lau was looking forward to a fine crop to be gathered during the first Moon of the Chinese Year. The trees flower in April, so that the nuts require eight or nine months to mature.

The spirit of the slain servant having been duly honoured and put to rest for another year, the nuts are gathered and sold, and are still greatly prized by the Ko-chow natives and any Chinese who is fortunate enough to obtain them, both for medicinal purposes and as charms.

BRETSCHNEIDER

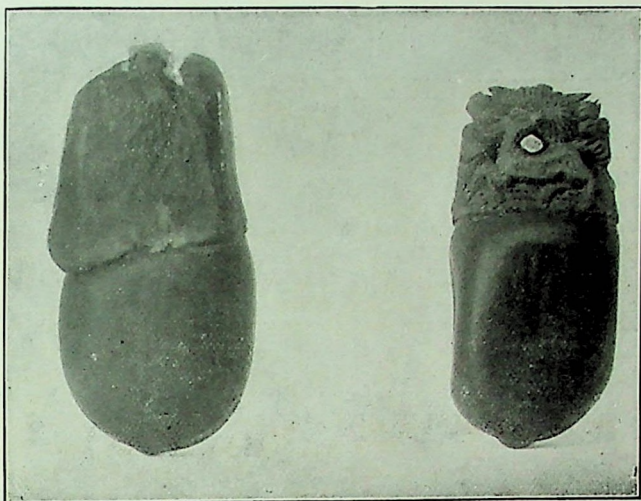
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JOHN C. FERGUSON

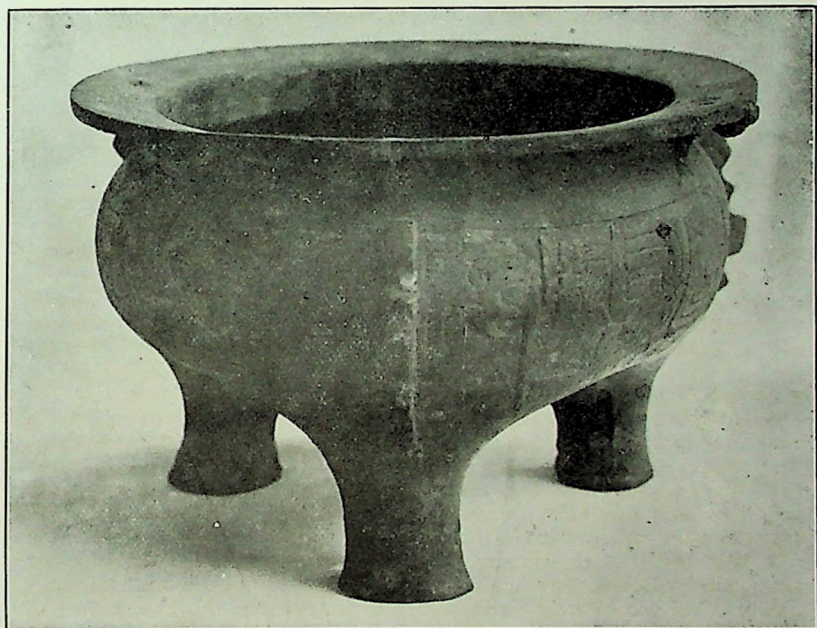
Dr. Emile Vassilievich Bretschneider was born on the 22nd June, (July 4) 1833, at Mitau (in Kurland) and died at St. Petersburg on the 29th April, (12th May) 1901.

Having obtained his degree of Doctor of Medicine in the University of Dorpat in 1858, he practiced medicine for two years abroad. On his return to Russia he entered the service of the Ministry of Foreign Affairs, and in March, 1862, he was appointed Physician to the Russian Legation at Teheran. In 1866 he was transferred to the Russian Legation at Peking, where he stayed till February 1884. "During his sojourn in Peking he had the good fortune to be associated with the Archimandrite Palladius, Chief of the Russian Ecclesiastical Mission in Peking, and with him took full advantage of the opportunity afforded in the splendid library of Chinese works attached to the Mission" (unfortunately the Library was burned by the Boxers in 1901).

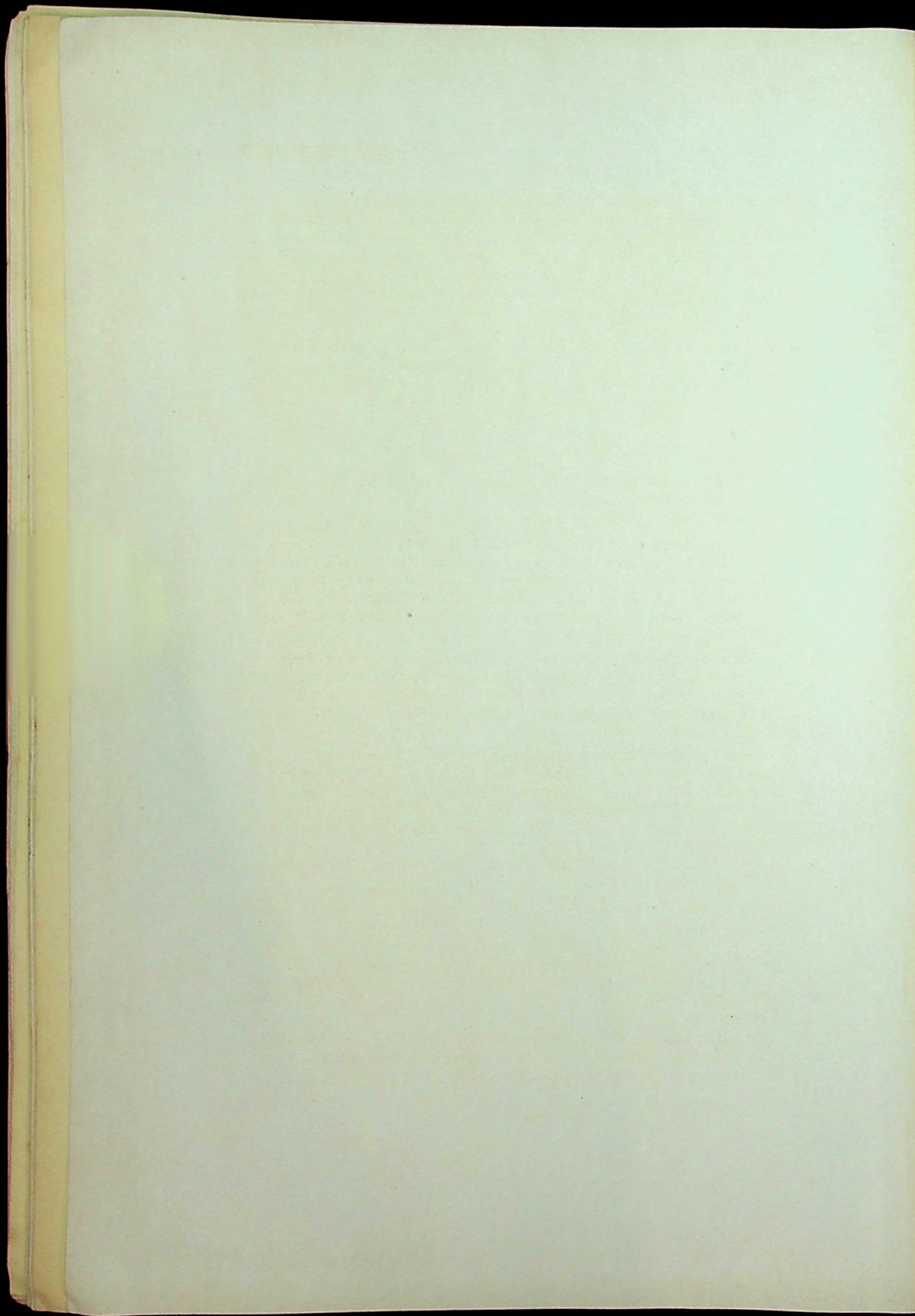
He first directed his studies to the Chinese language and literature, but later he devoted himself to the study of Chinese history, geography and botany. Dr. Bretschneider retired in February, 1884, and in his retreat at St. Petersburg he continued the work of editing and revising the works



Tibetan Nuts of Ko-chow. Left : Nut in Natural State,
Right : Nut carved at Top. (Someobai enlarged).



A fine Example of the Type of Ancient Chinese Bronze Vessel called *Li*.
In an American Collection.



which are now recognized as standards. In 1886 he was made a corresponding member of Académie des Inscriptions et Belles-Lettres. He was also a correspondent of the Société Géographique de Paris.

Good obituary notices of Dr. Bretschneider appeared in the *T'oung Pao*, July, 1901, by Henri Cordier, together with a photograph of him, and in the *Journal of the North China Branch of the Royal Asiatic Society* Vol. XXXIII, by T. W. Kingsmill. There are also similar notices in *Izvestiya* of the Imperial Botanical Garden, 1901, and in the Report of the Imperial Russian Geographical Society, 1901. The passages in this article which are in quotation marks are taken from Kingsmill's excellent article.

The voluminous works by Bretschneider, the majority of which are written in English, may be divided into three groups: (1) Historical Geography, (2) Botany and (3) Pure Geography.

HISTORICAL GEOGRAPHY

Among his works on Historical Geography the first to bring him into prominence was:

1. NOTES ON 大秦國 TA T'SIN KUO, by E. Bretschneider, M.D., *Chinese Recorder*, Vol. III, July 1870, pp. 29-31.

This was republished by Trübner in 1871 in pamphlet form bearing the heading of "On the knowledge possessed by the Ancient Chinese of the Arabs and Arabian Colonies, and other Western Countries, mentioned in Chinese books," by E. Bretschneider, M.D., 1871, br. in 8-vo, pp. 27.

2. NOTES ON CHINESE MEDIAEVAL TRAVELLERS TO THE WEST, by E. Bretschneider, M.D., *Chinese Recorder*, Vol. V, Shanghai, 1875.
3. CHINESE INTERCOURSE WITH THE COUNTRIES OF CENTRAL AND WESTERN ASIA DURING THE 15TH CENTURY. *Chinese Review*, Vols. IV and V, 1875.
4. NOTICES OF THE MEDIAEVAL GEOGRAPHY AND HISTORY OF CENTRAL AND WESTERN ASIA. Drawn from Chinese and Mongol works and compared with the observations of Western Authors in the Middle Ages, by E. Bretschneider, M.D., Physician to the Russian Legation at Peking. Accompanied with two maps. London, Trübner, 1876, in 8, pp. 1V-1 p. ch. n.-233.

This work was published in the *Journ. N. C. Br. R. A. S.*, Vol. X, 1876, pp. 75-305.

5. UEBER DAS LAND FU-SANG. NACH DEN ALTEN CHINESISCHEN BERICHTEN, von E. Bretschneider, M.D., Yokohama, 1876.

(On the land of Fu-Sang. According to the ancient Chinese accounts, by E. Bretschneider, M.D., Yokohama, 1876.)

This brochure was reprinted from the *Mittheilungen der Deutschen Gesellschaft für Natur und Völkerkunde Ost-Asiens*. Yokohama, Nov. 1876.

6. ELUCIDATIONS OF MARCO POLO'S TRAVELS IN NORTH CHINA, drawn from Chinese Sources, by the Archimandrite Palladius (*Jour. N. C. B. R. A. S.*, Vol. X, pp. 1-54).

This is an English version of an article by Archimandrite Palladius translated into English by Dr. Bretschneider with his notes and commentaries.

7. ARCHAEOLOGICAL AND HISTORICAL RESEARCHES ON PEKING AND ITS ENVIRONS, by E. Bretschneider, M.D., Physician to the Russian Legation at Peking, Shangahi, American Presbyterian Mission Press, 1876, in-8, pp. 63, with 5 maps. (This work was reprinted from the *Chinese Recorder*, 1875, Vol. VI.)

The French version of this work was published in 1879, under the title of "Recherches archeologiques et historiques sur Pékin et ses environs," par M. le Docteur E. Bretschneider. Traduction française par V. Collin de Plancy, Interprète de la Legation de France à Pékin: Paris, Ernest Leroux, 1879, in 8-vo. pp. 133-1 p. of Ch. n. (It forms Vol. XII of publications de l'Ecole de Langues Orientales Vivants.).

This work was honoured by the Academie des Inscriptions et Belles-Lettres.

8. MEDIAEVAL RESEARCHES FROM EASTERN ASIATIC SOURCES. Fragments towards the knowledge of the Geography and History of Central and Western Asia from the 13th to the 17th Century, by E. Bretschneider, M.D., London. Trübner, 1888, 2 vols., in 8-vo. Vol. I, with a map of Middle Asia, pp. XII-334. Vol. II, with a reproduction of a Chinese Mediaeval map of Central and Western Asia, pp. X-352. These vols. are part of Trübner's Oriental Series.

9. NOTES OF TWO JOURNEYS ACROSS MONGOLIA IN 1847 AND 1859, BY ARCH. PALLADIUS.

With an introduction and notes and commentaries on the geography and botany of Mongolia with a map, by Dr. E. Bretschneider. (published in the *St. Petersburg Geographical Society's Bulletin* Vol. XXII, N1, 1892).

As we may see from the French version of the above work by Palladius, it is erroneously considered as having been written by Dr. Bretschneider. "Itinéraires en Mongolie par Bretschneider (sic!). Traduit par M. Paul Boyer." (*Journal Asiatique*, IX, Serie I, N2, Mars-Avril, 1893, pp. 290-306).

WORKS ON BOTANY.

Dr. Bretschneider's researches on Botany are no less deep and valuable than his works on Historical Geography. As a matter of fact, his works on the Botany of China are still considered invaluable and must remain for the future the fountain-head of all researches into this subject. He enriched the Botanical Gardens of St. Petersburg, Europe and America with new species of plants discovered by him in China, seeds of which he always sent to these institutions. In honour of Dr. Bretschneider a genus of plants of South China was named *Bretschneidera*.

10. EARLY EUROPEAN RESEARCHES INTO THE FLORA OF CHINA, by E. Bretschneider, M.D., Shanghai, American Presbyterian Press, 1881 in 8-vo, pp. 194.

"This work commences with a valuable historical account of the early European researches in the Flora of China, starting from the work of Mendosa's once renowned 'History of the Great and Mighty Kingdom of China,' which first appeared in a Spanish version published in Rome in 1585, and ending with the Abbé Grosier in 1785.

This communication was laid before the N. C. B. R. A. Society on 19th November, 1880, and was subsequently published in Vol. XV of its Transactions."

11. BOTANICON SINICUM. NOTES ON CHINESE BOTANY FROM NATIVE AND WESTERN SOURCES, by E. Bretschneider, M.D., London, Trübner, in 8-vo. pp. 228-1 p. of Chinese names (The first part of this work was published in *Transactions of N. C. B. R. A. S.*, 1881, Vol. XVI, pp. 18-288).

12. THE SAME. PART II. THE BOTANY OF THE CHINESE CLASSICS WITH ANNOTATIONS AND INDEX by Ernest Faber, Dr. Th., Shanghai, Kelly and Walsh, 1892, in 8-vo; 1 p. of Chinese names, pp. 468.

This appeared in 1891 in *Transactions of N. C. B. R. A. S.*, Vol. XXV.

13. THE SAME. PART III. BOTANICAL INVESTIGATIONS INTO THE MATERIA MEDICA OF ANCIENT CHINESE; Kelly and Walsh, Shanghai, 1895, in 8-vo., 623.

This work first appeared in *Transactions of the N. C. B. R. A. S.*, Vol. XXIX. In the first part of this longest, the work by Dr. Bretschneider, as in his geographical works, he has given a bibliography of the early Chinese works on the subject, fully annotated with extensive notes on foreign authors who have treated the subject of Chinese *materia medica*, with remarks also on the botanical knowledge of the adjacent nations of Korea, Mongolia, Tibet and Manchuria.

Part II of the work consists of detailed lists of plants named in Chinese works, with their Chinese and Botanical names and remarks on the authors who have treated of them, Chinese and European.

Part III is devoted to the *materia medica* of the Chinese.

14. HISTORY OF EUROPEAN BOTANICAL DISCOVERIES IN CHINA, by E. Bretschneider. London, 1898, 2 vols., gr. in 8-vo., pp. XV-1 to 624, 625 to 1167 (for this work the Imperial Russian Geographical Society awarded him a gold medal in the name of P. P. Semenov).
15. ON THE STUDY AND VALUE OF CHINESE BOTANICAL WORKS. With notes of the History of Plants, etc., from Chinese sources. With eight wood cuts. Foochow, 1870, in 8-vo.

(This account was published in the *Chinese Recorder*, Vol. III.)

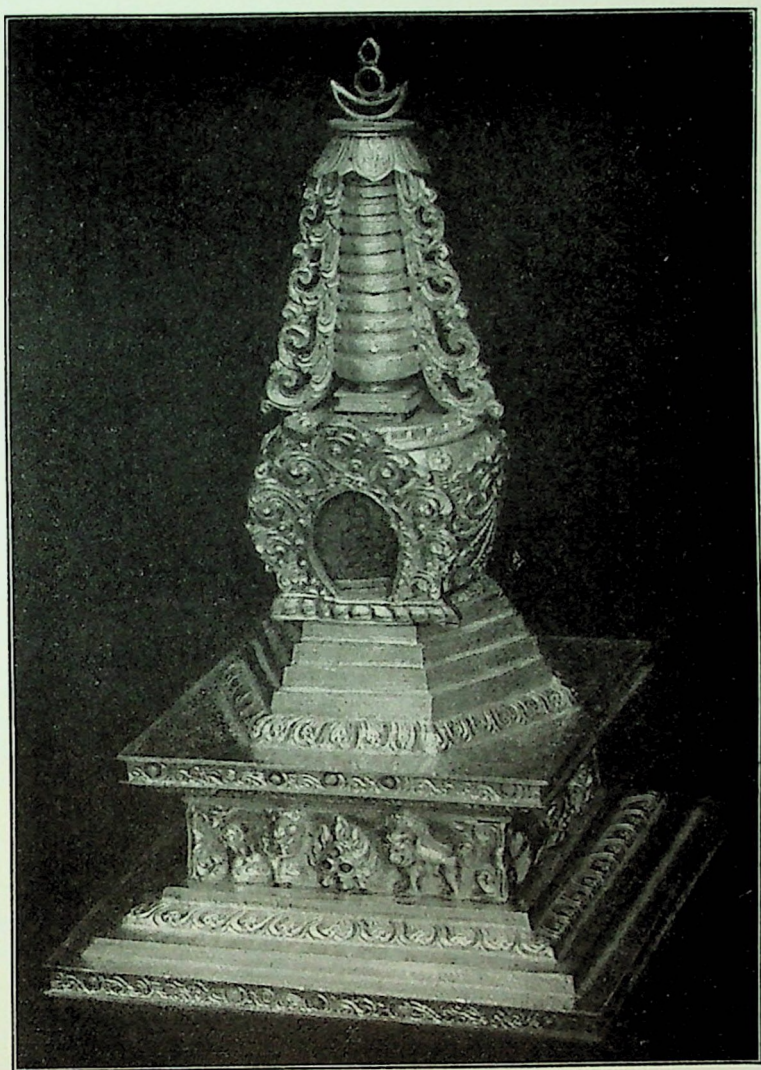
THE CHINA JOURNAL

16. NOTES ON SOME BOTANICAL QUESTIONS CONNECTED WITH THE EXPORT TRADE OF CHINA, by Dr. E. Bretschneider, M.D., Br. in 8-vo., pp. 14 (in two columns), Peking, 7th Dec., 1880 (Extract from the *North-China Herald*).
17. ON THE CHINESE SILK WORM TREES, by E. Bretschneider, M.D., Br. in 8-vo., pp. 9 (in two columns). (Extract from the *North-China Herald*).

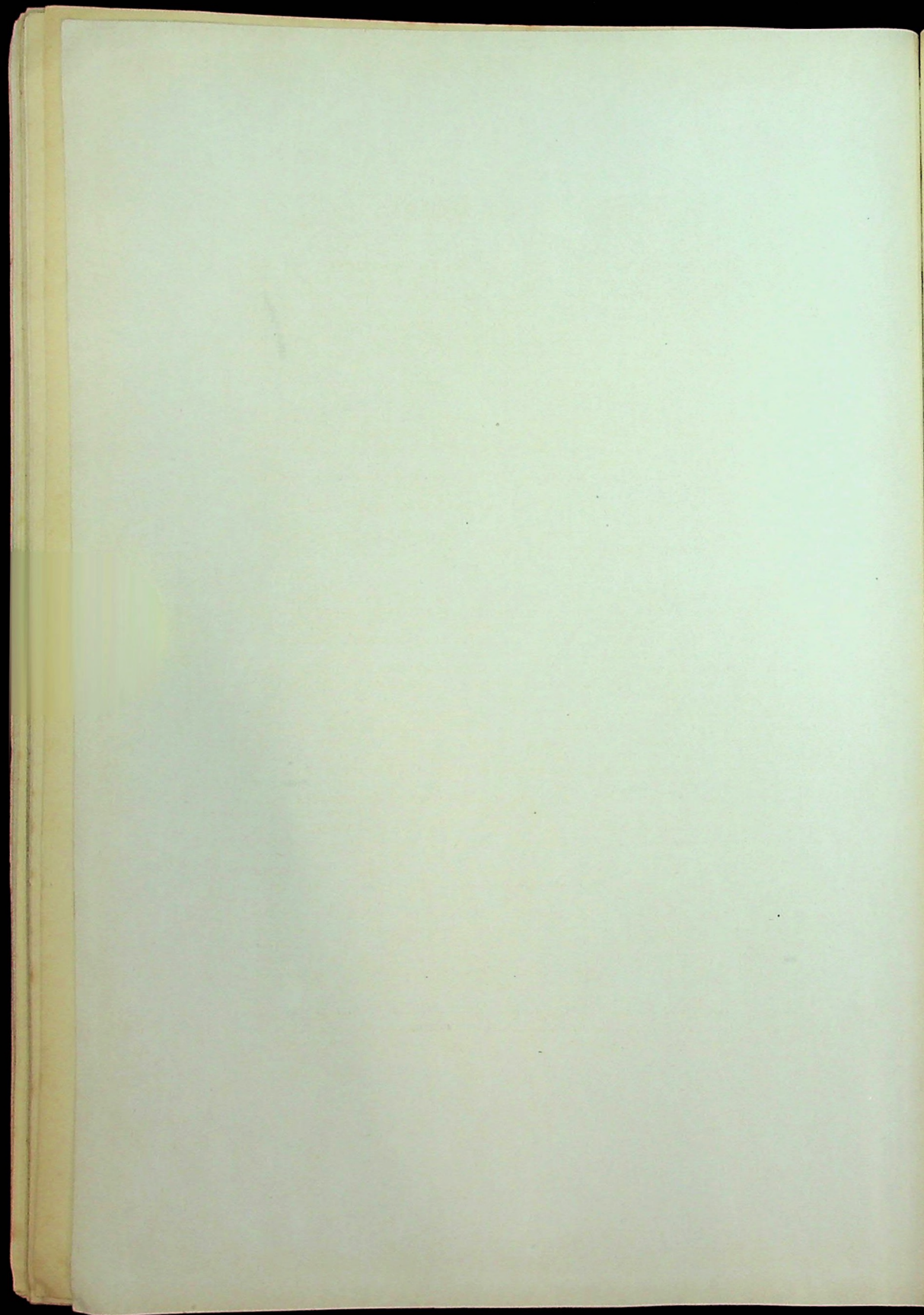
WORKS ON PURE GEOGRAPHY.

The contributions of Dr. Bretschneider to the Science of Pure Geography consists of his articles, published in the geographical magazines, and maps of China, engraved and printed in Russia. The latter are renowned for their accuracy and for setting out all topographical peculiarities in excellent proportion.

18. DIE PEKINGER EBENE UND DAS BENACHBARTTE GEBIRGSLAND, von Dr. E. Bretschneider, Artz der Kaiserl. Russischen Gesandtschaft in Peking. Mit einer original Karte (Ergänzungs heft N46 zu Petermann's "Geographischen Mittheilungen." Gotha, Justus Perthes, 1876. Br. in 4-vo.
19. CONCERNING THE NAME OF A RUSSIAN DISTRICT IN SOUTH MANCHURIA. St. Petersburg, 1900; Br. in 8-vo; pp. 17, 1 map. (*Po povodu naimenovaniia nedavno vznikshei v Juznoi Manchurii russkoi oblasti.* St. Peterburg, 1900.)
(Reprinted from the *Izvestiya* (Bulletins) of the Imperial Russian Geographical Society, Vol. XXXVI, N1.)
20. ON THE ARTICLE OF LIEUT.-COLONEL ILINSKY CONCERNING KUANGTUNG PENINSULA. St. Petersburg, 1900. Br. in 8-vo., pp. 26-28, 1 map.
Po povodu statyi Podpolkovniya Ilinskogo o Guandunskom poluostrivie, SPB, 1900.)
(Appeared in *Izvestiya* Imp. Russ. Geograph. Society, Vol. XXXVI, N4.)
21. MAP OF CHINA. Published in 1896, St. Petersburg, as supplement to the "History of Botanical Discoveries." (The second thoroughly revised and enlarged edition was published in 1900, St. Petersburg. Engraved and printed by A. Ilyin.)
22. Five supplementary maps :
 1. Northern part of Chihli.
 2. Western Hills of Peking.
 3. Central China and the Yangtze River (In two sheets : A and B.)
 4. Big rivers of Kuangtung (Canton) province.
 5. Sketches of Yunnan province.(Maps engraved and printed by A. Ilyin, St. Petersburg, 1898.)



A Beautiful Brass Dagoba from Peking, the Contents of which are discussed in Editorial Comments.



EDITORIAL COMMENTS

THE CONTENTS OF A BUDDHIST DAGOBA FROM PEKING : In company with Mr. K. C. Ramsden, its present owner, we opened and examined the contents of a handsome brass dagoba which was purchased a few years ago at Mukden from one of Chang Tso-lin's soldiers after the latter's return from Peking. It was said to have been acquired in the latter city during its occupation by the Manchurian troops after the Kuominchun had been driven out. As a matter of fact at this period in Mukden many very valuable Chinese curios and *objets d'art* were to be had at comparatively low prices. It was suggested by Mr. Ramsden that the contents of this dagoba might make the subject of an interesting note in these pages, so we give them here :

- (1) A wooden obelisk $\frac{3}{4}$ inch square at the bottom and $3\frac{1}{2}$ inches tall, with parallel sides, painted red with some strange characters painted in yellow on the sides, and a small picture of a dagoba on one of the triangular facets, also in yellow.
- (2) One long and thirteen short prayer rolls bound to the obelisk with silk thread.
- (3) Six small bags of coarse yellow cotton fabric containing broken cypress or *Thuja* leaves.
- (4) All packed in tight with loose broken cypress or *Thuja* leaves, the latter giving out a pleasant aromatic smell.

SHANGHAI'S ONLY MUSEUM CLOSED : The only natural history and ethnological museum available to the general public in Shanghai has at last had to be closed owing to the unsafe condition of the ceiling and roof. We are referring to the Museum of the Royal Asiatic Society, which for several decades has been the only thing of its kind in this great and prosperous city.

We have already referred several times in this journal to the necessity that has arisen for an entirely new building on the site occupied by this Society, the present two storied edifice having, after long service, arrived at a state when it is no longer economical to repair it any further. This has been hastened by building operations that have taken and are taking place in the immediate vicinity, especially the pile-driving which modern building in Shanghai requires to ensure a sound foundation for the ever increasing superstructures. Huge cracks have appeared in the walls of the old building, while the woodwork in many places has been riddled by white ants.

Unfortunately the Society is not in the financial position to proceed at once with a new building, and so is making an appeal to the public for funds, by which means it hopes to raise at least the major portion of the hundred thousand taels or so necessary to erect an edifice suitable and commodious enough for the Society's expansion.

The Honorary Curator of the Museum states that at least two floors the size of the present one are needed for proper display and housing of the natural history and other specimens at present in the Museum ; while the Library has now grown so extensive that a whole floor in the new building should be devoted to it and the reading room, instead, as at present, of a small part of the ground floor. The whole of the ground floor should be given over to the auditorium, the present one being far too small. Thus four floors are comfortably disposed of. If another two floors could be added, one could be used for an Art Gallery, where exhibitions of pictures and the like could be held, and the other to quarters for the staff, offices, storerooms and so on, all of which are badly needed.

Such a building and institution would be a credit to this community, which would at last be able to pride itself on being abreast of the times in such matters.

We sincerely trust the public in Shanghai will support the worthy efforts of this Society.

A. DE C. S.

ART NOTES

THE ART OF THE SHANG DYNASTY: In a lecture delivered before the Institute of Fine Arts at the Peking Union Medical College on October 8, Professor L. Chi, the archaeologist, discussed a series of articles excavated at Anyang, Honan, which marks the site of Shi Chi, the ancient capital of Yui of the later Shang Dynasty. The articles consisted of pottery, shell work, inscribed bones and bone work, bronzes and objects in stone. The lecturer claimed that, notwithstanding statements by scientists to the contrary, China had an art from the very earliest times, as these objects clearly show.

The most interesting of them are the stone works, most of which are in the form of perforated discs or axe heads, used for ceremonial purposes. "Fragments of carved birds and animals have been found, but the most amazing discovery is the lower half of a squatting human figure. . . ."

The decorative art of the Shang period consisted of patterns ranging from the most naturalistic to the most highly conventionalized. Indeed, the animal patterns played a very dominant rôle, becoming more and more conventionalized in response to various factors till their original form was forgotten. Many of China's mythical animals of to-day probably came into existence in this way. The diverse character of the objects may be explained by the fact that they have been unearthed from the site of an ancient capital and so may reasonably be supposed to have been brought together from different areas, but a certain element of unity which characterizes them indicates that they belonged to a single period.

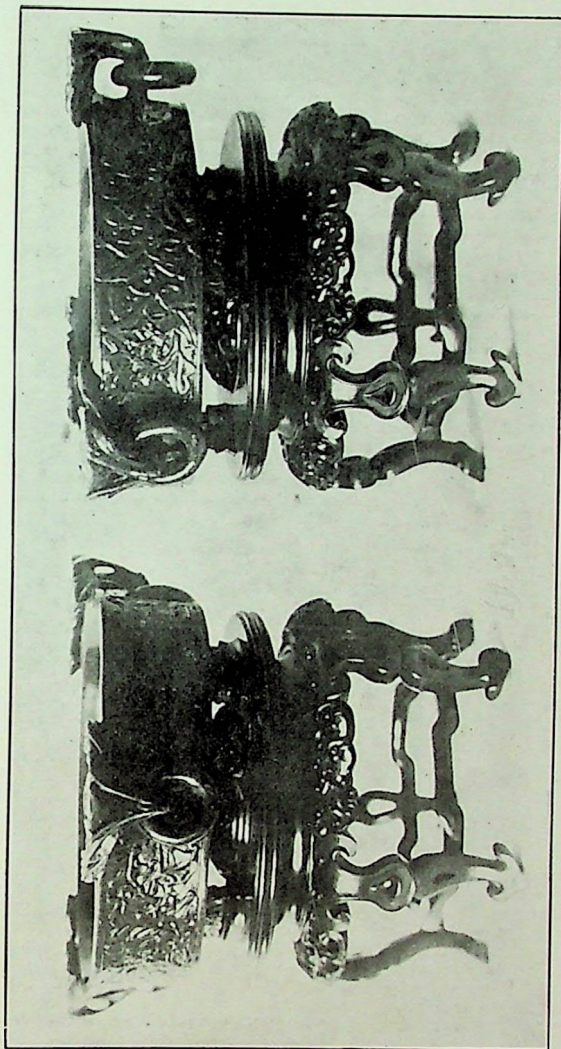
A SHANGHAI ARTIST'S MISFORTUNE: The sympathy of all artists and art lovers will be extended to Mr. M. A. Kichigin, the well-known Russian artist of Shanghai, who recently suffered the misfortune of having several rolls of paintings representing his whole summer's work in the Peking area stolen while on the Customs jetty on his return from the north. His easel and paint box were also stolen. This is a sad blow, the more especially as the artist had planned an exhibition of his pictures at an early date. We understand that he intends doing the pictures over again as far as possible from memory, a task in which we do not envy him.

PHOTOGRAPHIC EXHIBITION IN SHANGHAI: More and more is photography assuming the character of true art instead of being merely a mechanical process of transferring actual scenes on to paper. The latest example of this in Shanghai is to be found in the excellent work of the exhibitors in the Annual Photographic Exhibition of the City Bank Club held in the National City Bank Building from October 11 to 18 inclusive. Some really exquisite pieces of work were on view, work which showed a true appreciation of composition as well as of form and line.

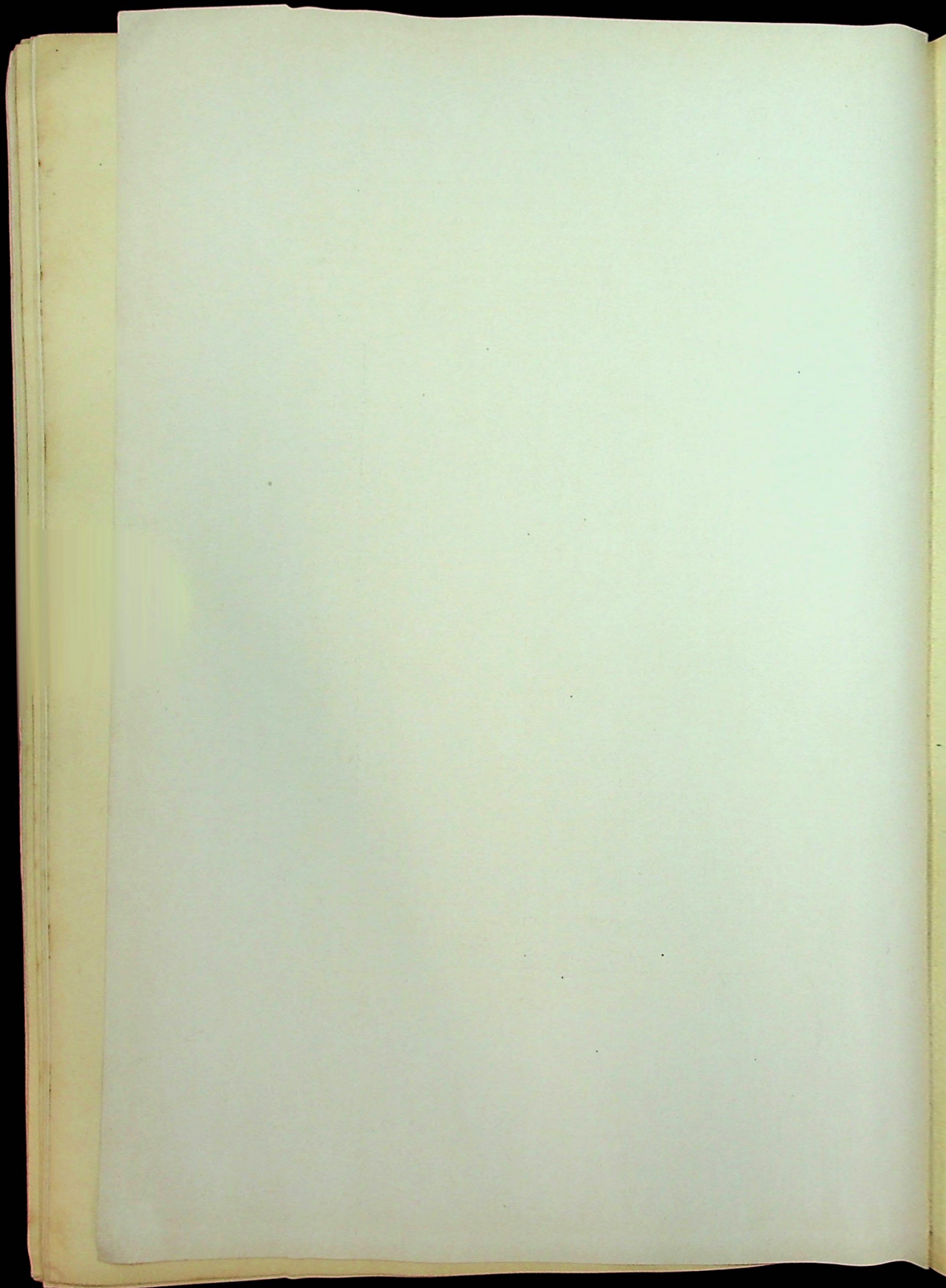
The McLay Interbranch Shield was competed for as usual, and again went to a Shanghai exhibitor, Mr. A. H. Remedios, whose picture entitled "On the Way to Market" presents a typical rural scene in the Ningpo district of Chinese farmers carrying their produce to market advancing along a cobbled causeway flanked on either side with bamboo and other vegetation and a low conical hill in the background.

The second prize went to Esther M. Fredrickson of San Francisco for her picture "A Winter Morning," while the third prize was awarded to Mr. J. A. Johnson in appreciation of his rather remarkable picture of a rainy scene in the outskirts of Shanghai, which he entitled "When Mists and Rain Spread." Honourable mention was given to Mr. J. H. de Carvalho's picture "Dance Away the Night," showing a nude figure dancing in the moonlight beside a pine tree, a composition obviously made up of a miniature figure and a dwarf Japanese tree with artificial background of sea, hills, sky and moon. Mrs. Hilda G. Ozorio's picture of tree tops and cloudy sky, called "The Cool Region of Celestial Dew," also came in for honourable mention, as well as Mr. Souza Aguiar's river scene "Rio Piracicaba," the last being one of the exhibits sent from Brazil.

Some good pictures of Chinese life and types were shown, as well as of rural scenes. A flock of geese was exceedingly well portrayed in a picture by C. Q. Jui, who also showed a really good composition in which a priest stands in front of a stone monument in a temple yard. Altogether there were some 224 exhibits, making a brave array well worth a visit. The members of the Club and promoters of the Exhibition are to be congratulated on its success.



A Pair of Jasper-Jade Bowls, the work of Shanghai Artizans.



MODERN CHINESE JADE CARVING: In the accompanying illustrations are shown some further examples of modern Chinese jade and crystal carving, which should appeal to art lovers. They show very clearly that though earlier examples of this kind of work in China are of more value, yet it does not follow that present day artists in this branch of artcraft cannot do as well as their predecessors of the Ming and early Ch'ing periods. Of course, a lot of the modern work, being turned out in a hurry and in comparatively large quantities for the market in Europe and America, is far from attaining the high quality of workmanship of that of the periods just mentioned; but, on the other hand, pieces of so exquisite a quality as to be almost indistinguishable from older pieces are often to be met with, and these command high prices although entirely modern.

A. DE C. S.

REVIEWS

CHRISTIANS IN CHINA BEFORE THE YEAR 1550, by A. C. Moule; Society for Promoting Christian Knowledge, London. Price 15s.

As stated in the author's preface, the plan of this book has been to gather into one volume the available evidence of the existence of Christians in China in the early and middle ages of the Christian era, and to give in English translation the actual words of the original authorities, though avoiding as far as possible all generalizations, summaries, or expressions of personal opinion. And it may be said at once that the plan has been well carried out, the result being a book full of interest, at least to students of Chinese history and certainly to those engaged in missionary enterprise in this country.

The author regrets that the book remains incomplete because, as he says, the evidences of the presence of Christians in Old China have accumulated at a pace which has outstripped his leisure and ability. Leisure? Possibly. But certainly not the author's ability, for there is no one more capable of handling just this kind of material than he.

It is not surprising that there is so much evidence of Christianity in Old China, since, apparently, this religion was comparatively strong in this country during the thirteenth century, though by the time the Jesuit missionaries reached China late in the sixteenth century they found the very memory of Christianity there on the point of vanishing.

An examination of the various versions of the legend that the Apostle Thomas first brought Christianity to China by way of India leads to the conclusion that they have no foundation in fact. Undoubtedly the first advent of Christianity into China was when it was brought in by the first Nestorian missionaries, and, according to the author of the book under review, the Nestorian Mission to China of 635 A. D. is the first certain point in our knowledge of Chinese Christianity. Undoubtedly the famous Nestorian Tablet at Si-an Fu is the oldest Christian monument in China. Other early stone relics of the Christian faith have been discovered in recent years. These are stones or tablets on which different representations of the cross have been cut, along with inscriptions. One found at Ch'uan-chow shows a human figure with legs folded like a Buddha, but having wings and surmounted with a cross. Another at the same place shows a cross standing on a lotus on an altar. Similarly a stone cutting at Fang-shan, discovered as late as 1919, shows a cross standing on a typical Buddhist lotus pedestal.

By 1,000 A. D. Nestorian Christianity appears to have become extinct in China; but when the Mongols conquered China, Nestorian missionaries and later Roman Catholics began to visit China again, and the two forms of Christianity appear to have flourished for a while side by side, only to become almost extinct once more by the end of the 16th century, when the Jesuit missionaries first came to China and established themselves in Peking.

The Nestorian Tablet was actually buried deep in the earth, whether by accident or design is not evident, and was not rediscovered till early in 1625. Some workmen digging trenches near the district city of Chou-chih, thirty or forty miles west or south-west of Si-an Fu in Shensi, came across it. It was removed to Si-an Fu and set up in a temple called Ch'ung Jen Ssu outside the west gate of that

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city, where it remained for almost another three centuries, ere it was placed for protection along with other classical monuments in the *Pei Ling* inside the city itself.

Considered second only in importance to the Nestorian Tablet is a small manuscript found by Paul Pelliot at Tun-huang in Chinese Turkestan in 1908. It was one of a horde of manuscripts which had lain for centuries sealed up in a small room out in the rock in the Ch'ien-fo-tung near Tun-huang, and which was found by Sir Aurel Stein earlier in the same year. It contains first a hymn to the holy Trinity, then the East Syrian form of the *Gloria in Excelsis Deo*, followed by lists of saints and books, and, finally a historical note. Its date is placed at not long before 800 A. D., and it is believed to have been written at Si-an Fu. Four other Christian documents have also been found at Tun-huang.

The foregoing examples of evidence of Christians in early China will suffice to show the nature of the contents of the book under review. There is much evidence derived from documents and writings dealing with the Mongol or Yuan period, but this is, perhaps, less fascinating than the earlier relics, though still full of interest. Space will not permit, however, of further details, which must be left to readers to dig out for themselves. The task they will find an easy and pleasant one.

A. DE C. S.

THE ETHICAL AND POLITICAL WORKS OF MOTSE, translated from the original by Yi-pao Mei, PH. D.; Arthur Probsthain, London, 16s.

Motse was a philosopher who lived and taught in China a little over two thousand years ago. His "forcefully stated doctrines on ethics, politics, economics and religion seriously threatened Confucianism to become the representative Chinese view of life and way of living. . . . Unfortunately for the intellectual world, Confucianism finally won out through suppressing its rival systems, including Moism."

We doubt if many foreign residents in China outside the ranks of missionaries and sinologists have ever heard of Motse, or that before the Christian Era there was a man in China who was preaching the doctrine, we might almost say gospel, of the universal love of mankind. Yet this is what Motse was doing, at the same time advocating the "exaltation of the virtuous" as the very foundation of government, and condemning in no uncertain terms offensive wars, that is to say, wars undertaken for the expansion of territory.

He scourges the rulers of his day, stating that they had mistaken might for right; and extolled the ancient sage-kings, Yao, Shun, Yü, T'ang, Wen and Wu, "because they administered the government in such a way that those in the empire that did good would be encouraged and those that did evil would be obstructed."

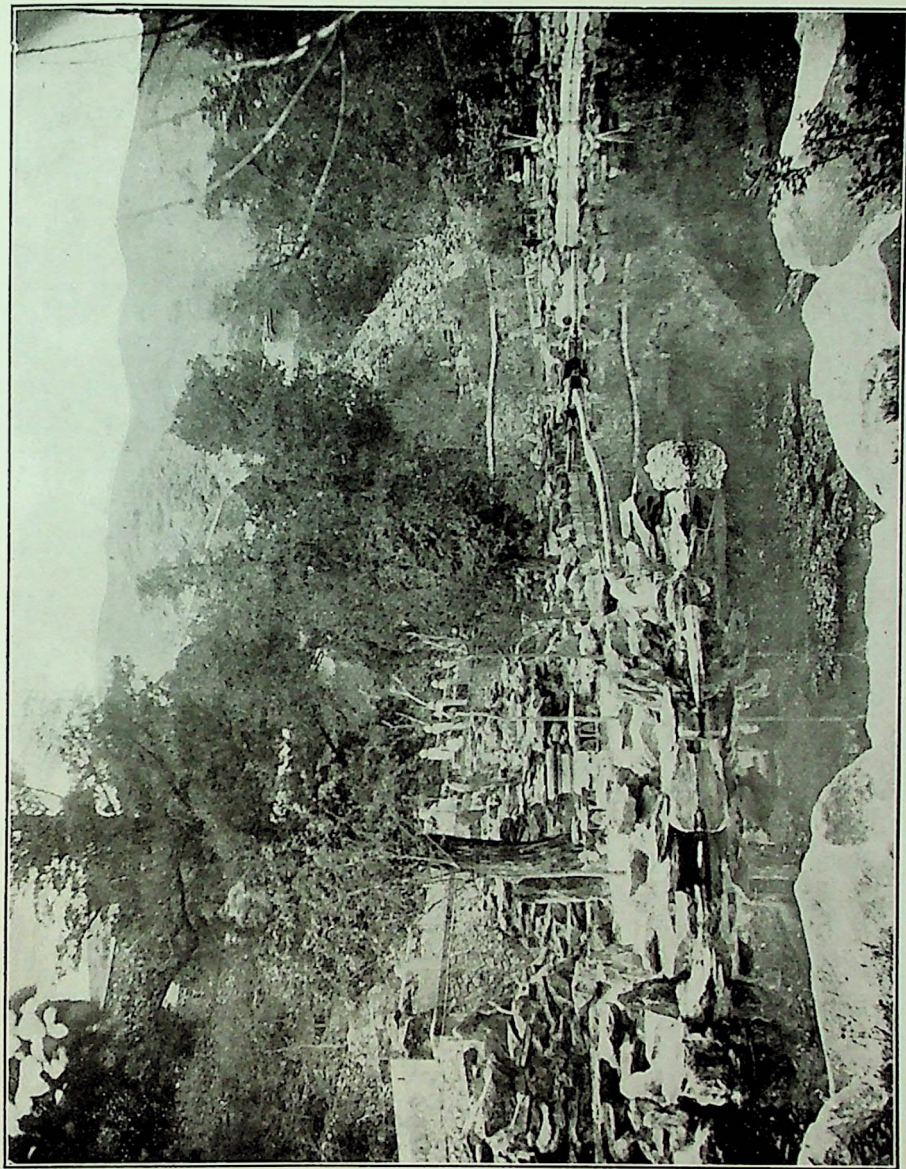
Here was a man who appears to have glimpsed the truth and was not afraid to denounce those in high places who gave office to their relations, the rich without merit and the good-looking, instead of to persons fitted to the task, as they undoubtedly would do if they had a stiff bow to mend or a sick horse to cure.

The translator in his preface suggests that the vitality of Motse's philosophy is "evidenced by the fact that Young China in her present period of unrest is again eagerly turning to her old teacher who taught under rather similar conditions over two milleniums ago." Rather similar? We should say entirely similar, if not worse. If ever China needed such teachings as are to be found in Motse it is now, and if it be true that Young China really is turning to him, then we perceive a ray of hope penetrating the present darkness.

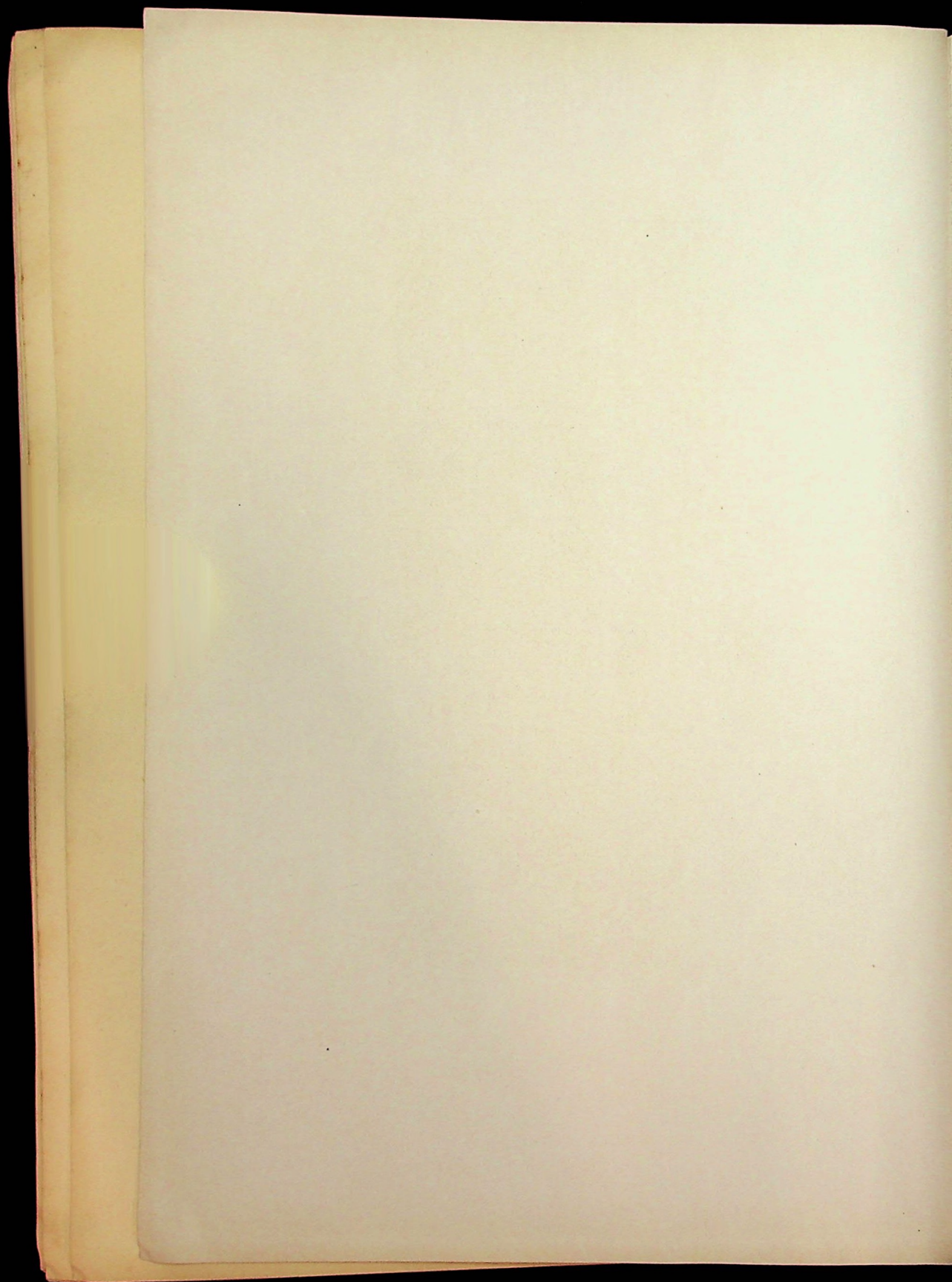
Dr. Yi-pao Mei's translation of Sun Yi-chang's "The Works of Motse with Commentaries," which he claims is universally adjudged to be the best amongst the Chinese texts on this philosopher's works, is certainly a book worth reading. It will help the reader to arrive at a better understanding of the Chinese people as a whole, amongst whom one often finds genuine adherence to such ethical teachings as those of Motse, which the translator maintains have taken deep root in the soil of the nation and the fibre of the people.

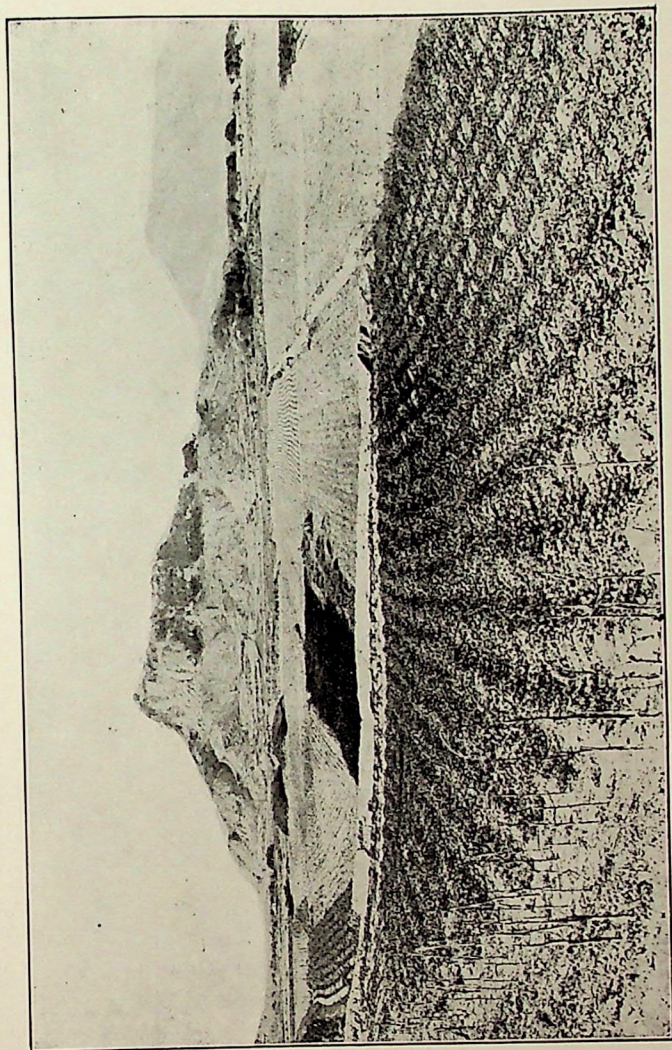
The book in which Dr. Mei presents this translation is one of Probsthain's *Oriental Series*, being printed and bound in conformity with the others already published, attractive books that no student of Oriental peoples or philosophies can afford to be without.

A. DE C. S.

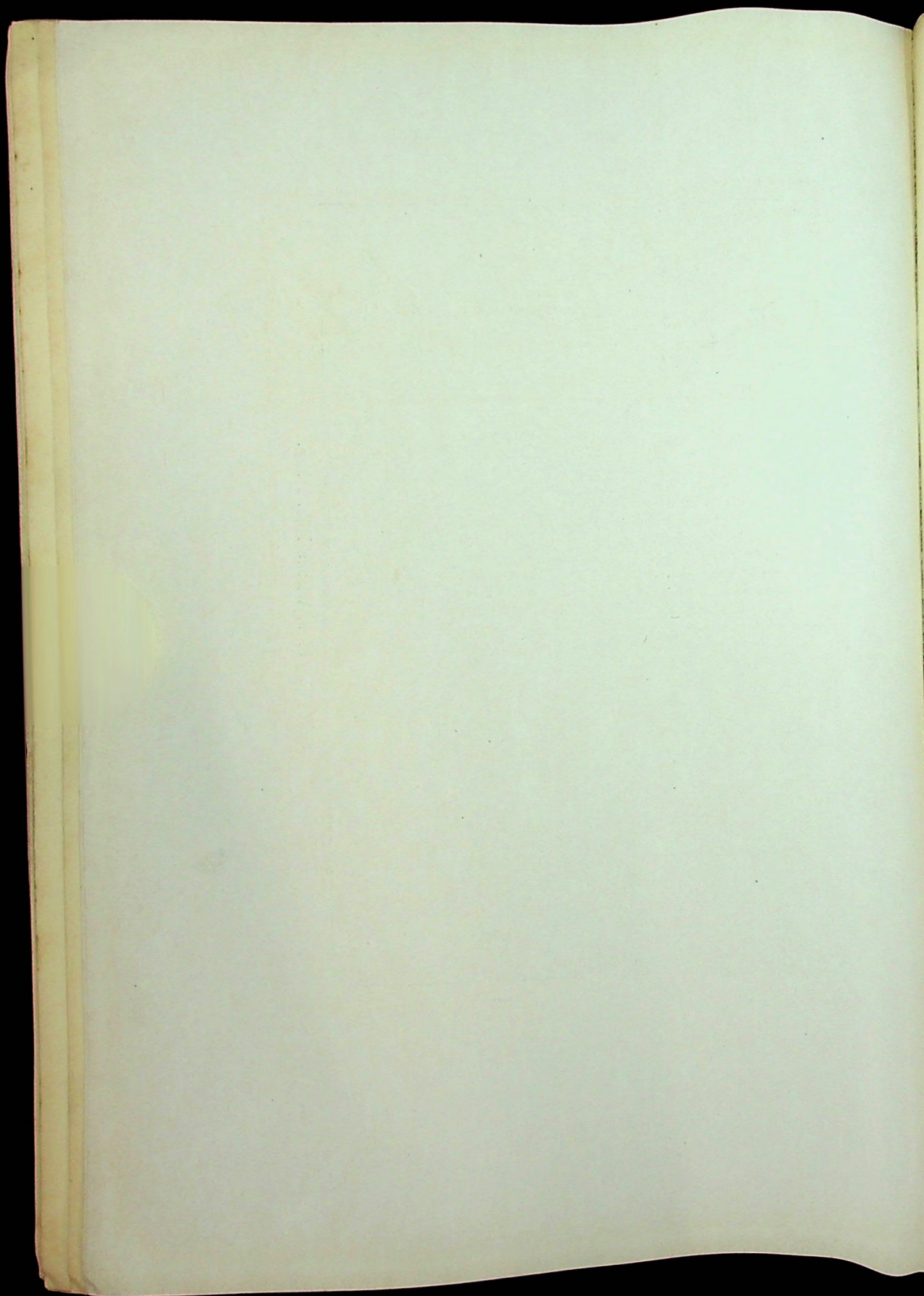


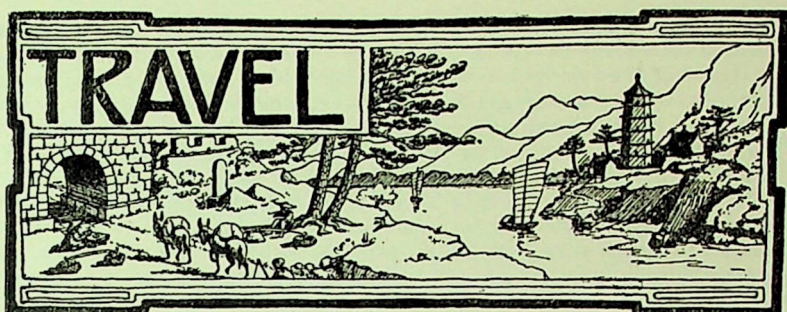
Shuang Ch'ing in the Hsiang Shan, Western Hills, Peking.





Shih Ching Shan, Western Hills, Peking.





THE WIDER ENVIRONS OF PEKING

A writer in the pages of this journal a couple of months ago describes feelingly the delights of a holiday in the Western Hills of Peking, and anybody who has resided for any duration in such treaty ports as Tientsin or Shanghai without being able to get away much will sympathize with him. Where the whole country is as flat as a billiard board, as it is round these two cities, anything in the way of a hill, however barren of vegetation, must come as a relief, so that it is easy to understand the ecstatic appreciation of such beautiful mountains—they are more than hills—as those that lie but a comparatively few miles to the west of the old Northern Capital.

Indeed, Peking, or Peiping as it is now called, is blest with really delightful environments, as anyone visiting that fascinating centre of China's cultural life may easily ascertain by making a few trips into the surrounding country.

Of course, the Western Hills, with their numerous commodious temples and comparative richness of vegetation, will be considered by most as the chief attraction to excursionists, and very rightly so, for in this direction lies everything of this nature that the heart can desire. Wonderfully laid out grounds belonging to temples that sprawl over half a hillside, with rockeries and crystal clear pools full of golden carp, fantastic conifers, weeping willows, blue, green and gold tiled pagodas, moss and fern filled dingles, winding, stony paths up deep ravines—all combine to make a trip to Peking's holiday resort a sheer delight.

But, as all who make this city their home know, the west is not the only direction in which lies such romance and enchantment.

The mountains sweep round to the north, and here lies the famous Nankow Pass, up which the railway winds in steep ascent till it passes through a tunnel near Ching-lung-chiao Station at the top, emerging on the other side of the Great Wall on to the mighty sweep of the Huailai plain. It is from Ching-lung-chiao Station that one makes the ascent of Pa-ta-ling to view the relics, here in an excellent state of preservation, of the greatest defensive rampart ever built by the hand of man.

While the deep valley, almost a ravine, which forms the Pass, contains sufficient vegetation in the way of trees and shrubs to soften the harshness of the tortured, rocky slopes, and, with the permanent stream that splashes down amongst the boulders at the bottom, helps to create what may be called smiling landscapes, the mountain tops, along which the Wall winds snake-like, are barren of all save the scantiest herbage; but this very aridity lends a wildness and enchantment to the scene. It helps one to see the savage Tartar horsemen that came raging down from the north on plunder bent in those far off days, and to hear their howls of fury as they found their progress stopped by this great stone barrier thrown across their path by the less warlike but far more astute Chinese.

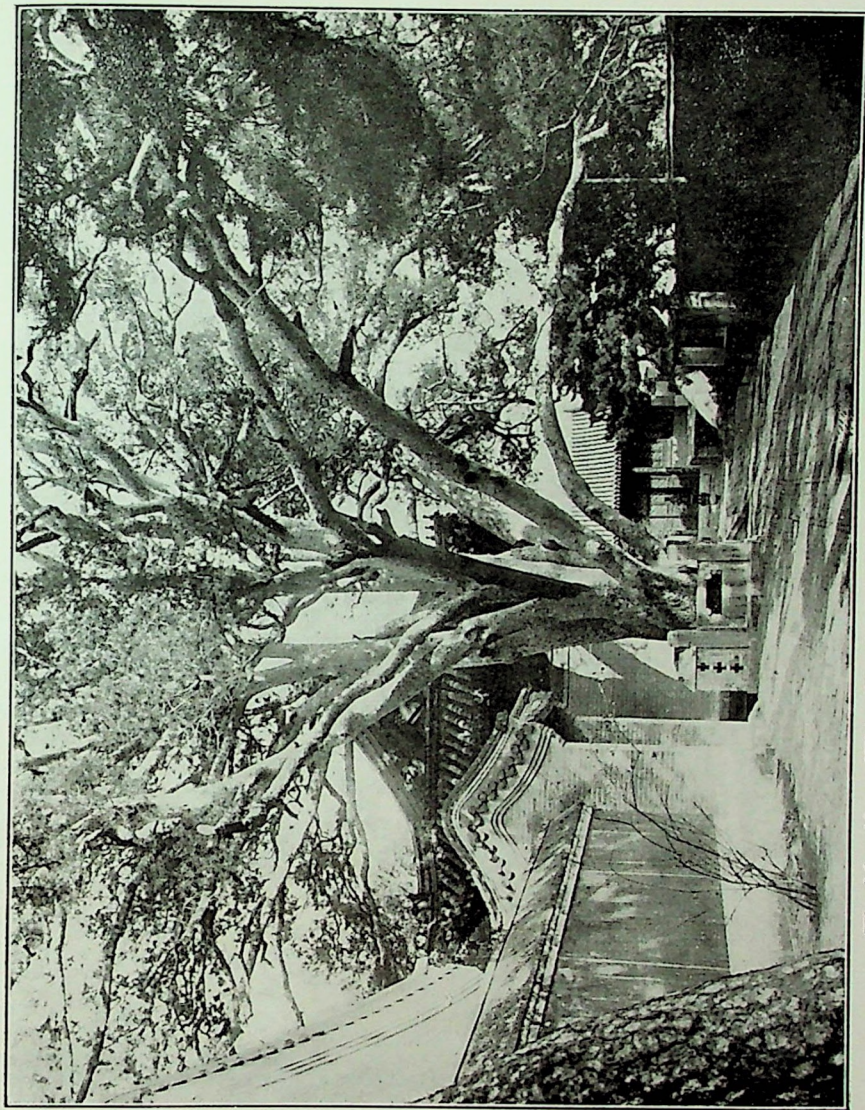
At the very top of the Pass is a gateway in the Wall, through which runs the old tea caravan route from the capital to Kalgan on the border of Mongolia and thence to Urga and so on to the very boundary of Siberia. Along this road, before the railway was built, passed the countless strings of camels that carried tea to the wild people of the north and brought back salt, wool and other commodities needed by the Chinese; and even to-day some of these silent-footed pack animals of the desert are to be seen slowly wending their ways along the tortuous track that serves for a road. Countless small donkeys, each with a preposterously big load, are also to be seen quick-stepping it up the steep incline of Pa-ta-ling and passing under the high arches of the gateways to the great wastes beyond the Wall.

There away to the north lie range after range of mauve-blue mountains, and in this direction, for those who have the time to go in search of them, are splendid hunting grounds, where all manner of game both large and small is to be found, even, it is said, tigers and bears; for it is in this direction that the famous *Wei Ch'ang* or "Hunting Fields" lie.

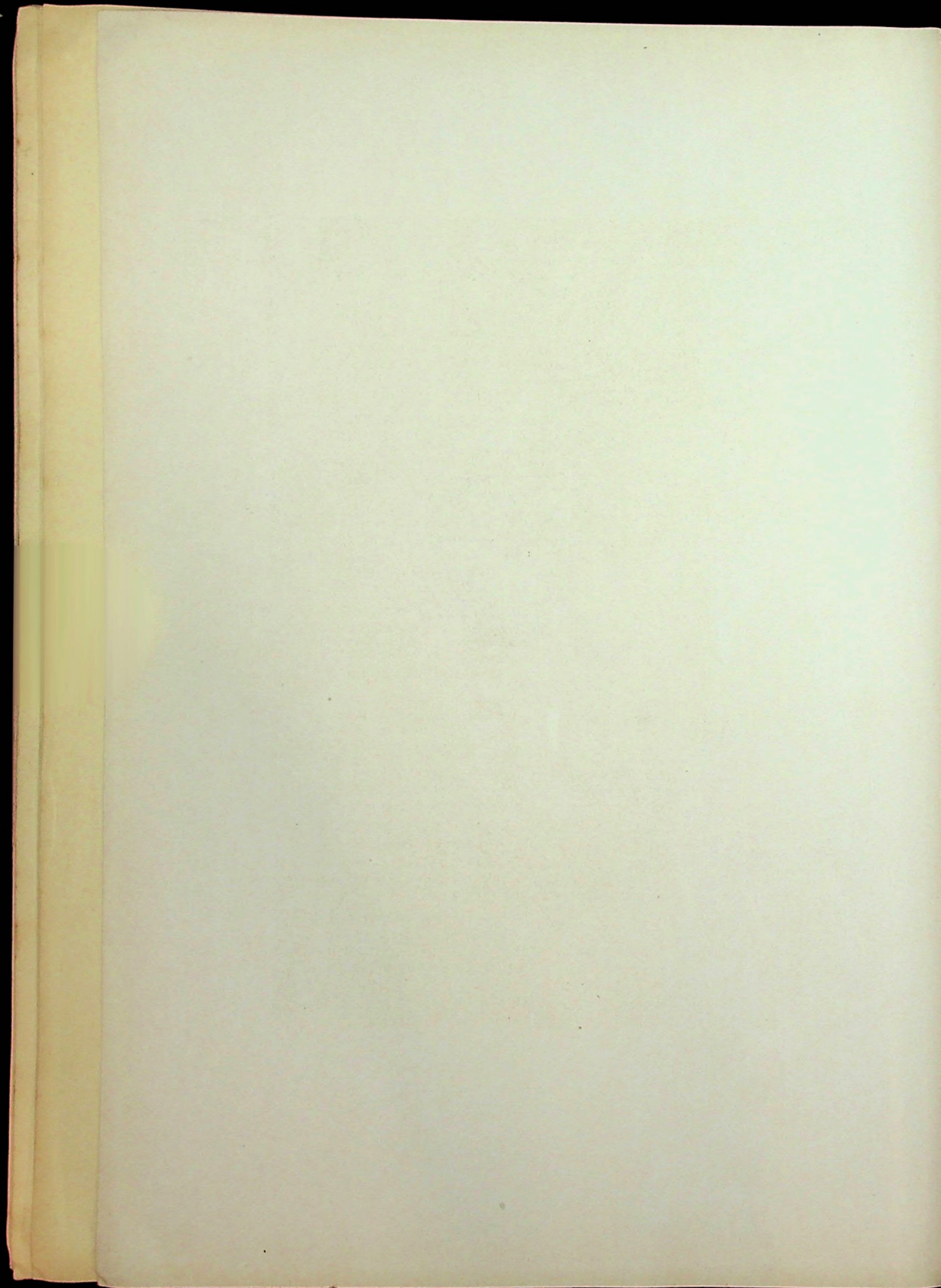
The station on the railway at the foot of the Pass, called Nankou, is the taking off place for another of the well-known excursions from Peking, namely, that to the Ming Tombs, known to the Chinese as the *Pei Ling*. These lie to the north-north-east of Peking at the foot of the mountains in this direction, and are reached from Nankou Station after a ten mile ride on a donkey or in a sedan chair, that is to say, if they are not accessible by the motor car, which is becoming ubiquitous in these parts now; we are referring to conditions as they existed a few years ago.

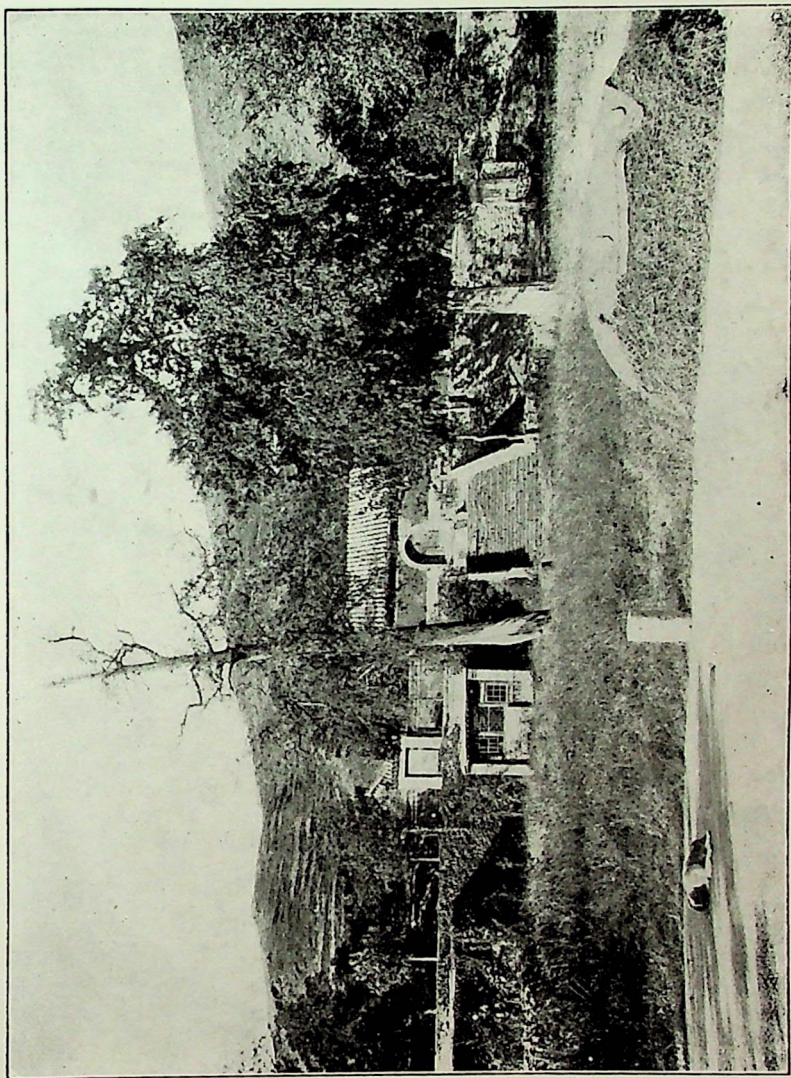
There is no need to describe the Ming Tombs here, since they are only too well known. Suffice it to say that they lie mid delightful surroundings and are imposing if for no other reason than their layout and the extent of the ground they cover.

While on the subject of tombs, we must not omit to mention the two areas in the environs of Peking devoted to those of the Manchu emperors and their consorts. The nearest of these to the city are the Hsi Ling, or Western Tombs, which lie in the hills to the south-west, and are reached from the railway station at Ch'ang-hsin-tien, near the famous Lu-kou-chiao, or Marco Polo's Bridge. Up to a few years ago there were considerable woods, almost forests, round the area containing the Imperial Tombs, but alas, these were destroyed by Chinese troops

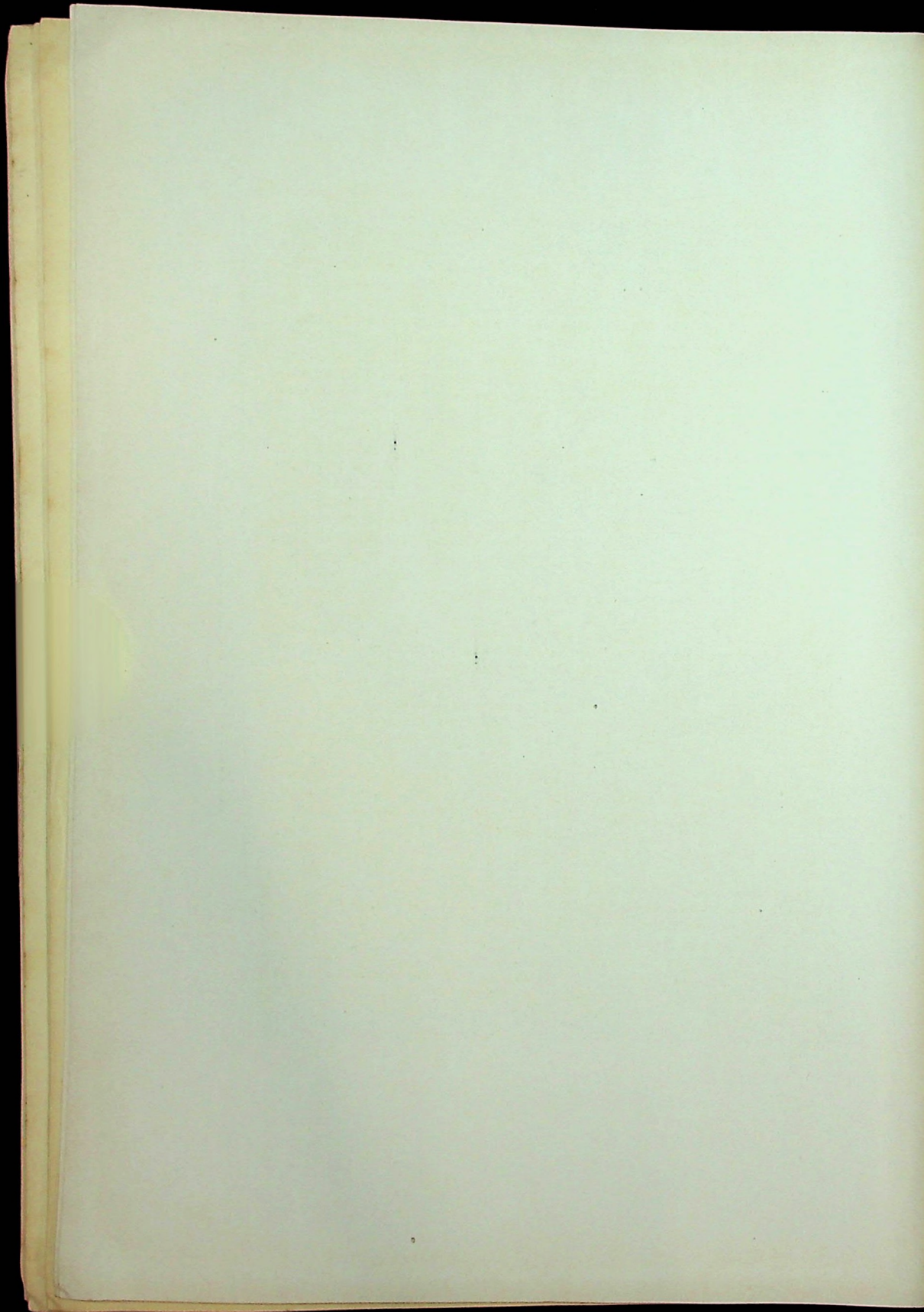


The Magnificent White Pine in the Ch'ieh T'ai Su, Western Hills, Peking.





The Front of Ch'ieh T'ai Ssu, Western Hills, Peking.



THE ENVIRONS OF PEKING

quartered in this district, who were allowed to cut down the trees and sell the timber in order to reimburse themselves for arrears of pay.

The Tung Ling, or Eastern Tombs, lie almost due east of Peking at a place named Ma-lan-yü, and here what may be described as an immense park with numerous trees and streams forms the last resting place of many of the rulers of the Ch'ing Dynasty, including the famous Emperor Ch'ien Lung and the notorious Empress Dowager Ch'u Hsi. Did we say resting place? Yes, resting place, unless there is something in the Chinese beliefs regarding the souls of the departed, in which case we doubt if the spirits of either of these monarchs will find peace and rest till they have been avenged of the desecration of their tombs, again by China's lawless soldiery, who broke the latter open and rifled them of the valuables buried along with the bodies of the mighty dead.

To the north of Ma-lan-yü lies very mountainous country that, up to the advent of the Republic in China, and even for the first few years of that regime, was heavily forested and full of game. It was popularly spoken of by foreigners as the Imperial Hunting Grounds, and was, in fact, an immense game preserve belonging to the Imperial family. In the early days of the Manchu Dynasty, it is said, such Emperors as Kang Hsi and Ch'ien Lung actually hunted there, but subsequently was never visited by royalty, though it supplied the Imperial table in Peking with various kinds of game.

After the Revolution, the land was sold, and one of the great tragedies of modern China enacted. The magnificent forests were destroyed, the timber from the mighty trees, mainly oak with a good sprinkling on the slopes of pine, spruce, and fir, was burnt where it lay, and the land given over to incoming Chinese settlers for farming purposes. To-day practically nothing is left of those once beautiful forests, while the game they harboured has almost completely disappeared.

To the north of this area lies the famous town of Jehol or Cheng-teh Fu, accessible from Peking by a road that leads in a north-easterly direction through the Great Wall at Ku-pei-kow, and here one finds the palace, often occupied by the Manchu rulers, whence in the early days of the dynasty the Imperial hunting parties set out. And this is, perhaps, the most delightful of all the delightful places that lie about the ancient capital of the north, an area abounding with places of interest and associated with many of the most dramatic episodes in Chinese history.

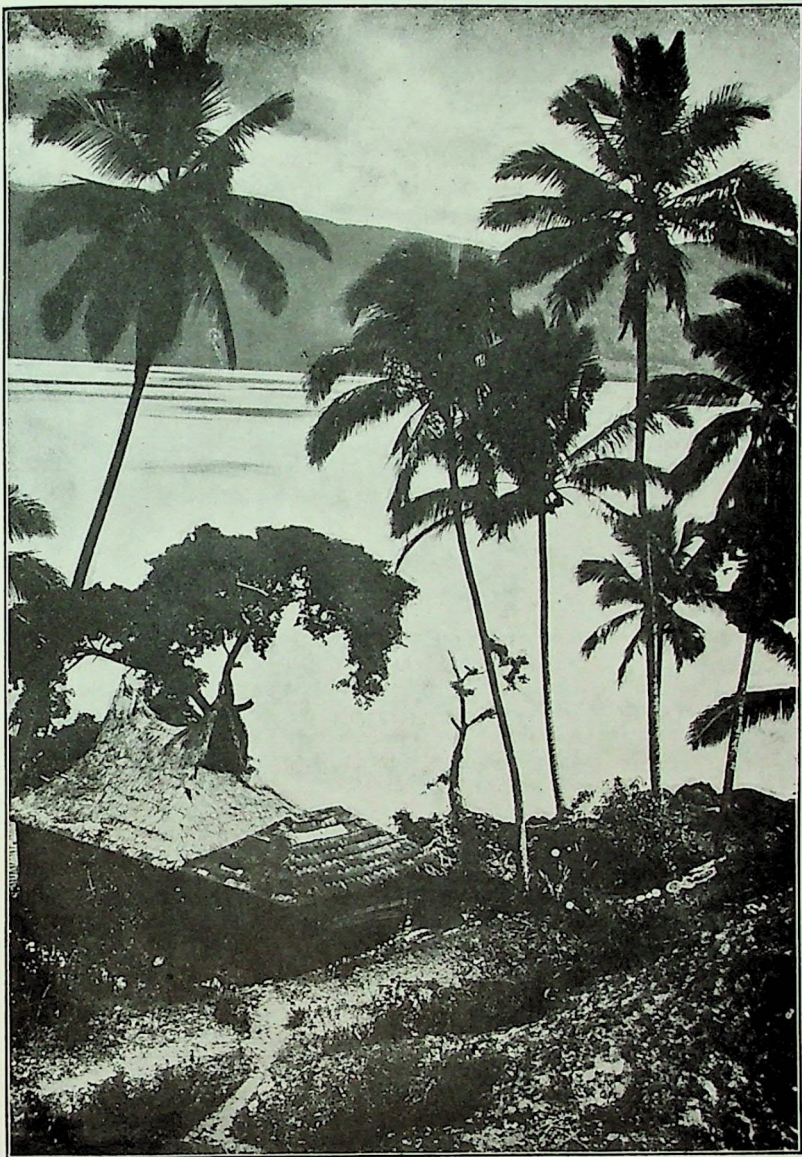
As motor roads take the place of the old cart roads and mule tracks, these places are being brought ever nearer to the great city, and it is but a matter of time when tourists will be able to make the round trip of them in a couple of days or so; but alas, the march of events has done much already to mar their pristine beauty, and it is to be feared that by the time they are placed on the regular lists of tourist agencies, there will be little left of the old romance that used to hover about them.

TRAVEL AND EXPLORATION NOTES

LAST CHAPTER OF A POLAR EPIC : With the discovery of the last camp, bodily remains and diary of the famous Swedish polar explorer Dr. Salomon August Andrée, who lost his life thirty-three years ago while attempting to reach and cross the North Pole in a balloon, accompanied by two companions, N. Strindberg and K. Fraenkel, the last chapter of one of the great epics of polar exploration is being written. It was on August 6 last that a Norwegian scientific expedition found the bodies of Dr. Andrée and Strindberg on White Island between Spitzbergen and Franz Josef Land. Subsequently the skeleton of Fraenkel was found by a Swedish expedition on the same island. The remains of these gallant explorers, together with instruments used by them and their diaries, have been brought to Stockholm, where on October 5, a funeral service was held and the remains cremated, previous to being laid in a specially constructed vault in the City Hall. Dr. Andrée's diary covering the period from July 13 to October 2, 1897, and consisting of 142 pages, has been published. It tells a story of heroic endeavour, bravery and cheerfulness in the face of danger and privation to which in the end the gallant party succumbed.

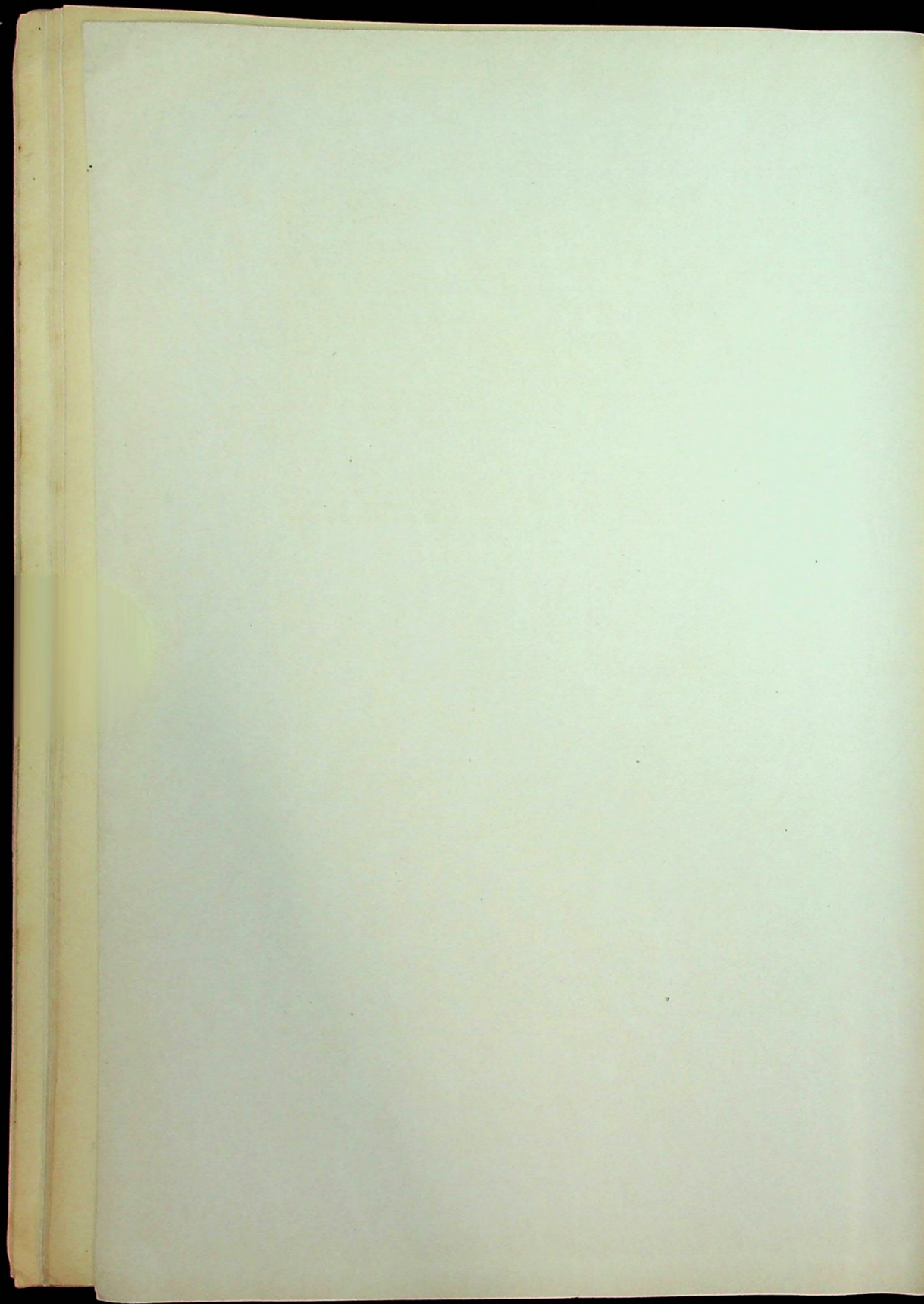
ASIATIC EXPEDITION RETURNS TO PEKING : October 7 saw the return to Peking of the members of the Asiatic Expedition of the American Museum of Natural History from the Gobi Desert where they have been carrying on extensive excavations for fossil remains during the past summer. The expedition's palaeontologist, Dr. Walter Granger, reports that the fossils they have secured represent the remains of seventy-five different species, several of which are new to science. Amongst the most interesting things found were the skull and skeletal parts of *Coryphodon*, which in appearance must have been like a long-legged hippopotamus, though not related to that animal. Parts of *Chailcotheres*, a member of the horse and rhinoceros group, but much more primitive and having a great claw instead of a flat hoof, were also found, as well as specimens of a new genus of deer with antlers the size and shape of a man's head. Dr. Granger is reported to have stated that this year's collection was the biggest and scientifically the most important one yet made by the expedition since it commenced work in 1922. Although the expedition's chief aim, as announced by its leader when it commenced, was to find the earliest remains of man in these parts, on the assumption that Central Asia was probably the cradle of the human race, no such remains have been found, although a mass of other valuable palaeontological material has been unearthed. Meanwhile some of the oldest, if not the oldest human remains have been found near Peking by members of the Geological Survey of China, causing considerable stir amongst scientists the world over.

FOREIGN SCIENTIFIC EXPEDITIONS IN CHINA : How much longer foreign scientific expeditions in China will be able to operate under anything like worth-while conditions appears doubtful. According to a recent report in the *North-China Daily News* (October 5), the question of permits for three proposed expeditions came up before a meeting of the officials of the Central Research Institute, and of the Ministries of War, Interior, Education and Foreign Affairs. It was decided that two of the expeditions, one German and one American, would be told to postpone their ventures till the North-western Provinces Scientific Expedition, which is now making investigations in Sinkiang, has completed its work and reported on its findings to the National Government, while the other American expedition should be allowed to proceed to Sinkiang provided its members conformed to certain regulations laid down by the Government. Amongst these are the stipulation that half the Zoological specimens secured must be donated to the Chinese Government, and all single specimens of any species shall be handed over to the latter. Officials or nominees of the Chinese Government shall be allowed to take



By Courtesy of the Official Tourist Bureau, Java.

A Beautiful View in Western Sumatra.

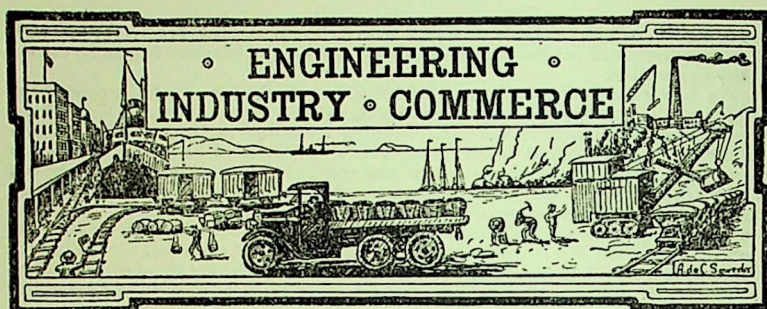


TRAVEL AND EXPLORATION NOTES

part in the expedition, we presume at the latter's expense, as has been the case with other expeditions of recent years; while no surveying instruments may be carried on the expedition.

We fear that under such conditions those who finance scientific expeditions to China will soon be completely discouraged, and the result will be that the splendid work in this direction that has been done by foreigners in China for the past two or three decades will come to an end. This is the more to be regretted since it is almost certain that Chinese scientists and scientific institutions will long remain too short of finances to carry out such work as is now being done by foreign scientific explorers. Thus knowledge of what China contains in the way of zoological, botanical and palaeontological material will be held back, not only from the scientists of foreign countries, but from those of China as well, who, in the long run, will be the greatest losers by what can only be considered as an extremely short-sighted policy. Incidentally, it may be pointed out, most countries welcome anybody who is willing to spend money on such kind of research within their borders, instead of placing obstacles in their way and hampering them with irksome restrictions.

THE SWEDISH EXPEDITION IN KANSU: A report from the Swedish Expedition at present in Kansu Province, which was started by Dr. Sven Hedin, who has, however, been unable to join it this year, is to the effect that good work is being done, some implements of the Stone Age having been discovered and the coast of an ancient sea at Chu Yen charted. The expedition has been in the field since last October.

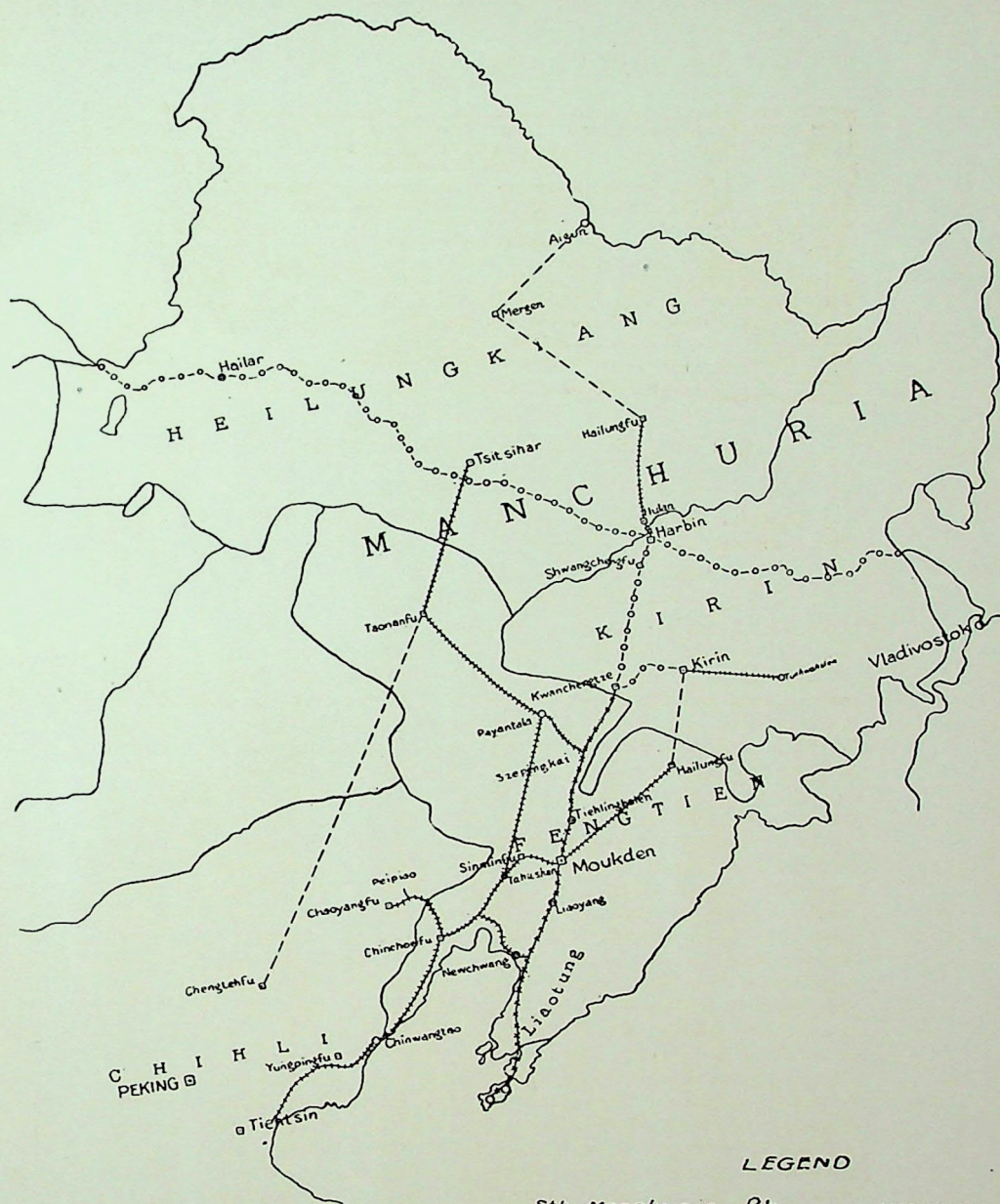


RAILWAY DEVELOPMENT IN CHINA

Railway development in China and elsewhere falls naturally into two categories :—

1. The construction of new lines.
2. The development of existing lines.

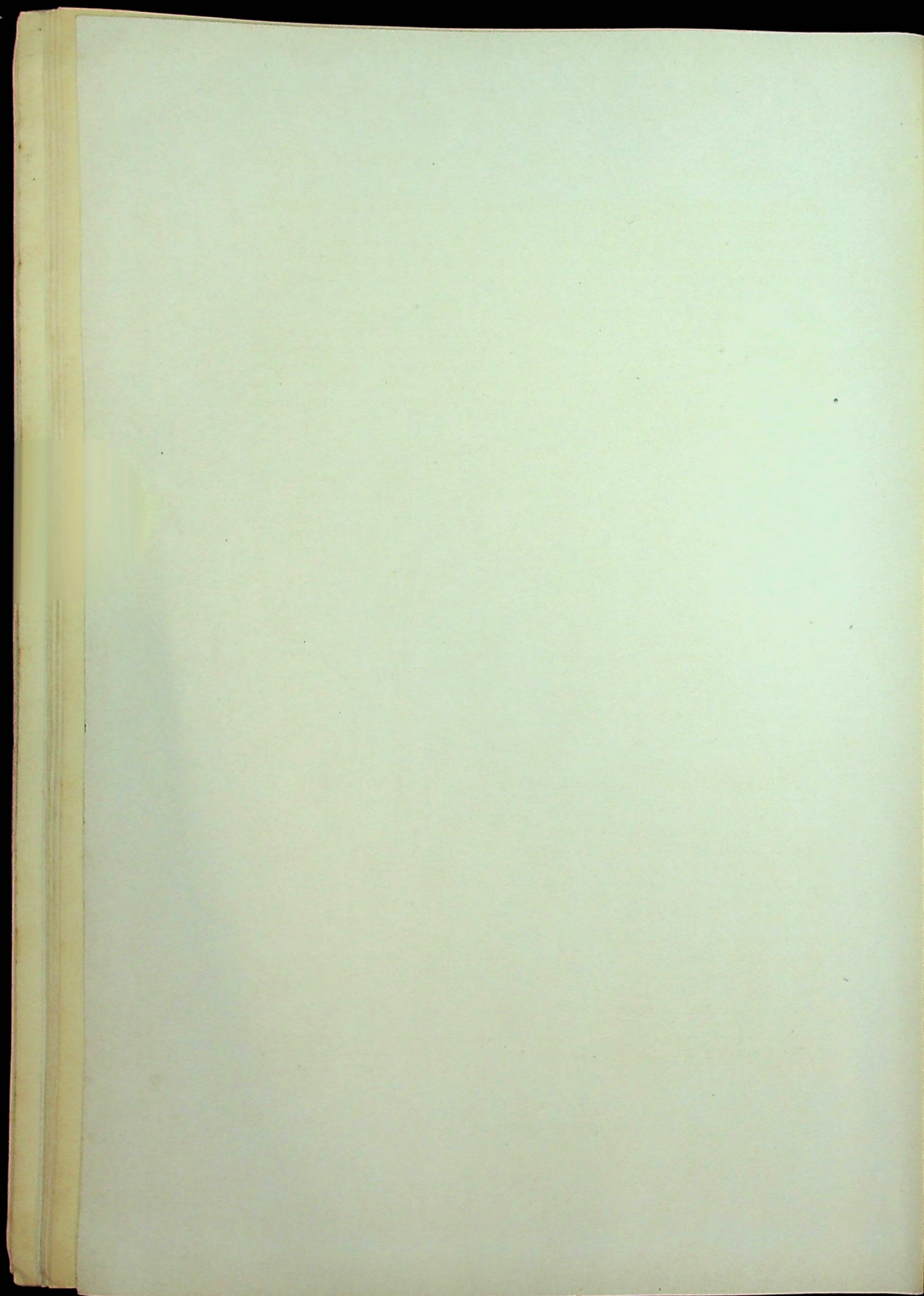
Of the first heading it may be said at once that China's record for the past sixteen years has been a singularly poor one. In the province of Manchuria, however, some effort has been made. Here strong local government and the Japanese sphere of influence in the eastern section have ensured a measure of law, order and security unknown elsewhere in China since the days of the Empire. Manchuria, with the single exception of the short rebellion of 1926, has never known the civil war which in China Proper has become a chronic disease since 1919. The area remains the granary of China, it has never seen famine, brigandage has been kept within its traditional bounds, and it is still sparsely populated. It has thus become the Mecca of the war-ruined, war-harassed natives of other provinces, more particularly Shantung. Emigration here has been phenomenal for the past four years. Fortunately for the emigrant a logical policy has been pursued as regards railways. A forward policy has been constantly followed. Japan has done a good deal. She might have done much more had she elected to co-operate with Chinese efforts in this direction at an earlier date. Yuan Shih-kai was the first to find during the years 1908 to 1910 that the full and free development of Manchuria as laid down in the Treaty of Portsmouth was a dream confined to Japanese hours of relaxation. The somewhat later experience of Anglo-American finance over the Chinchou-Aigun railway was a confirmation of this attitude; the tone of the Twenty-One Demands of 1915 seemed to shut the Open Door forever. The change of heart towards weaker peoples of which the Washington Conference in 1919 was the first symptom; the subsequent surrender of Tsingtao by Japan; the vital necessity of making Manchuria strategically and economically independent of both Japan and the rest of China which became obvious as the result of Chang Tso-lin's defeat by Wu Pei-fu in 1922; all these factors



LEGEND

Sth. Manchuria Rly.	—————
Chinese Eastern Rly.	- - - - -
Chinese Government Rlys.	
Projected Lines.	- . - . -

Map of Manchuria showing the Railway System.



RAILWAY DEVELOPMENT IN CHINA

must have inspired the Chinese authorities of this province to challenge once more the absurd claim to monopoly of railway development of which the parallelism agreement of 1905* was the rotten keystone. That their efforts have met with no little success is shown by the table of new construction below. That strategic and economic aims are nearing realization is shown by the map. Observe that Tsi Tsi Har in the north is now connected with Mukden, that the coal fields of Peipiao and Ta-hu-shan are now tapped by railways, that the construction of the Port of Hulutao just inaugurated will give Manchuria an outlet independent of Dairen, and that the completion of the Taonan-Jehol Railway just begun will complete that system of necessary strategic railways which must surely nullify the already doubtful boast of Shansi to be the model province of China.

SUMMARY OF NEW CONSTRUCTION

<i>Japanese Loan Lines</i>	<i>Miles</i>	<i>Completed</i>
Taonan-Angachi	141.7	1928
Supingkai-Taonan	264.0	1923
Kirin-Tun Hwa	130.5	1928
	536.2	
<i>Chinese Lines</i>		
C.E.R. Hulan-Hailun	125.0	1927
Tahushan-Payantala	156.0	1927
Chinhsin-Peipiao	70.0	1924
Mukden-Hailuncheng	155.0	1928
Taonan-Tsi Tsi Har	150.0	1929
	656.0	
Peking-Suiyuan extension 1915-1923	250.0	

Looked at from purely engineering standards this new construction has not been unwisely directed by either the Japanese or Chinese authorities. The rate for the Japanese loans is high at nine per cent., but money after the war was dear. The standards of construction indicate that mileage is a first essential if consistent with a rigid but wise economy. Thus no break of gauge has been tolerated. (All these lines are of standard 4-ft. 8½-in. gauge). Bridges, where much expenditure would have been involved, have been designed on a temporary basis in timber. Rails in the majority of cases are 60 to 65 pounds taken from the main lines of the S.M.R. or Peking-Mukden Railways. This weight of rail should become the standard for China. It is adequate to begin with and it means economies in bridge work and rolling stock.

* By this agreement all competitive railway construction for an unspecified distance east or west of the South Manchuria Railway and parallel to it was forbidden.

Manchuria's record in railway development is no small achievement even though the war chest had much to do with it. Elsewhere in China with the single exception of the development of the Peking-Suiyuan Railway there has been absolute stagnation. Other War Lords do not appear to have faced their necessities. Perhaps this is why Mukden persists.

This brings us to the subject of development of existing lines. Little or nothing has been done in this direction. There has been practically no development by means of branch line construction. The good roads movement inaugurated in 1921 was a step in the right direction if roads had been planned as feeders to the railways. Road planning, however, seems to have been too much the care of local government. The fact that roads have their limits as carriers even in these days of motor traction does not seem to be sufficiently recognized. The enthusiasm for aircraft must be described as entirely false. It is a diversion of much needed capital and is unsound economically.

Then, in spite of a stagnant policy as regards feeders to railways in operation, traffic on the railways in the short intervals of peace is always on the increase. Equipment should thus increase to cope with it. Lack of funds forbids this. The following figures contrasting Chinese and American equipment indicate some of China's more pressing railway necessities. Thus, for dealing with approximately the same tonnage per mile of line, the railways of the United States were equipped in 1924 with 0.27 engines per mile against China's 0.037, while freight was handled by 10 wagons of an average capacity of 44.5 tons against China's two of an average of 23. These figures relate to the year 1918: as regards China and since then of course the position has grown vastly worse.

Then the age of locomotives is a vital point. In the year 1922 the average age of passenger and goods locomotives in the Chinese railways was 10 and 9 years, respectively. Since that date there have been negligible additions, so that the average age of existing locomotive is now somewhere about 18 years. Contrast this with American railway practice for the four years 1922-1925. Out of an average total of 64,426 locomotives, 10,962 were retired and 10,105 built, indicating entire renewal of all locomotive stock in about 24 years, or giving an average age per locomotive of 12 years only. Further, although retirements exceeded renewals by over 900 there was a net increase of tractive power over the period considered of 207,203,000 pounds, or average tractive power per locomotive increased from 36,935 to 40,625. The average tractive capacity of the Chinese locomotive in 1922 was 24,000 pounds for dealing with similar tonnage per mile of line.

Further, the margin of surplus locomotives in the railways of the United States is over 13 per cent., even when traffic is at the peak. China has never had any margin worth speaking of, and it speaks volumes for the foreign locomotive superintendent that with such inadequate equipment he extracted a mileage record of 22,500 miles in 1922, which is better than the United States record for the same year by some 3,000 miles. Again, in 1925 the railways of the United States retired 128,573 freight cars and replaced them by 139,083, an increase of 8,739, but the new

RAILWAY DEVELOPMENT IN CHINA

wagons installed had an average capacity of 47.37 tons against 38.77 for those retired. Retirement of freight stock in the United States is on the basis of entire replacement in 20 years, giving an average life of 10 years. In China the average age of wagons is about 25 years and retirement only takes place as the result of fires and wrecks.

Again, huge sums are urgently required for the roadbed, which cannot have been kept up to proper standards with war's exactions to satisfy and its disruptions to cope with.

We come to personnel. China's 18.5 men to the mile will be contrasted with America's 7.7. It will be observed that the number of employees increased from 13,111 to 20,216 in the period 1918 to 1922 with very little increase in mileage.

All departments have been compelled to absorb an increasing number of returned students, for whom there was no adequate employment. That such a condition obtains is due to the absence of a programme of new construction. For sixteen years there has been no railway expansion, Manchuria excepted. Railway men rust in routine.

Finally we and the Nanking Government must recognize that the War Lord and armed neutrality must be a feature in affairs Chinese for some years to come. From every point of view, humanitarian or economic, we must hope for more of the Manchurian type. Wealth is power in China: railways are wealth, for every mile of line in China is capable of paying its way within a year of opening. Within two years it will earn profits. China must hope for the War Lord some part of whose expenditure is productive, for the War Lord who does not kill the goose which lays the golden eggs.

ENGINEERING AND INDUSTRIAL NOTES

BUILDING

CONSTRUCTION OF NEW APARTMENT HOUSE TO START: According to a report in the *Shanghai Evening Post and Mercury* of October 18, work is to commence almost immediately on a 36 flat apartment house on Avenue Haig near Route de Say Zoong, to be known as Elias Apartments. According to the plans there are to be fourteen flats with four rooms and two bathrooms, the same number with five rooms and three bathrooms, four with two rooms, one with one room, and a large bungalow apartment on the ninth floor with eight rooms and five bathrooms. The building will contain ten stories. There will be garages for the occupants as well as a large laundry, while every modern convenience will be included in the flats.

ROAD MAKING

HANGCHOW TO CONSTRUCT ASPHALT ROAD FROM RAILWAY STATION TO WEST LAKE: Very shortly the municipality of Hangchow expects

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to complete a new asphalt road from the Railway Station to West Lake, which will greatly benefit the tourists next season. A city planning commission is being formed to carry out various modern municipal improvements.

AVIATION

AIR MAIL AND PASSENGER SERVICE TO BE INAUGURATED BETWEEN SHANGHAI AND BERLIN: On August 20 a telegram from Nanking by *Kuo Min* gave details of the contract between the Ministry of Communications of the National Government and the German Lufthansa Company for operating air mail and passenger lines between Shanghai and Berlin. There are to be three routes: the first via Nanking, Tientsin, Peking, Manchuli and Siberia; the second via Nanking, Tientsin, Peking, Kulun, in Outer Mongolia, and Siberia; the third via Nanking, Sinkiang, Kansu and Siberia. The new company is to be known as the Sino-German Aviation Corporation, and it is expected that the service will commence within the year.

CONSTRUCTION OF AVIATION FIELDS AND RADIO STATIONS IN ICHANG AND CHUNGKING: It was expected that September would see the completion of the aviation fields and radio stations in Ichang and Chungking, which were constructed under the supervision of technical experts of the China National Aviation Corporation. These two cities are to be the stopping places for the Hankow-Chengtou air mail and passenger service.

HELIUM DISCOVERED IN ESTHONIA: A report has come to hand that large quantities of helium have been found in Esthonia, which, if true, will break the American monopoly of this gas, so vital to the interests of aerial navigation by lighter-than-air craft.

MINING

OILFIELD DISCOVERED IN MONGOLIA: What is said to be a very promising oilfield, extending some 200 Chinese *li*, has been discovered in the neighbourhood of Kolonti, a point some ten versts from Jalaiknor on the Western Section of the Chinese Eastern Railway. It is reported that a company with a capital of 5,000,000 yuan (dollars) to be called the Fuli Oil Company is proposed, an application for its formation having been filed with the authorities.

REPORT OF 1929 MINERAL OUTPUT BY PROVINCES REQUESTED BY NANKING: In order to be able to formulate measures for the increase of the mineral output the Ministry of Agriculture and Mining has instructed that a detailed report of the mineral output of each province for 1929 be submitted to it. Drafts of regulations to govern the investment of foreign capital and Sino-foreign companies for mining enterprises in China have also been presented by the Ministry to the Executive Yuan for consideration.

AGREEMENT FOR RESTRICTION OF NITRATE PRODUCTION FOR ONE YEAR: An agreement for lower production of nitrate for one year was concluded between representatives of the nitrate industries of Europe and Chile, who control 80 per cent. of the world's production. All countries except the United States are included in this pact, which also provides for the elimination of competition, and does not permit of any increase in prices over last year. In the meantime negotiations for prolongation of the contract will be continued.

ENGINEERING AND INDUSTRIAL NOTES

AGRICULTURE

FARM BANKS TO BE OPENED IN AGRICULTURAL DISTRICTS: To tide the farmers over their financial difficulties between the time of sowing and reaping their crops the State Council of the Executive Yuan at Nanking has instructed the Ministry of Agriculture and Mining immediately to take steps to establish farm banks in the agricultural districts for the purpose of making small loans to the rural population.

NEW GOVERNMENT REGULATIONS DEFINING AGRICULTURAL AND MINING EXPERTS: The Experts Examination Committee of the Ministry of Agriculture which met recently in Nanking decided that hereafter only practical miners and agriculturists with ten years' experience will be permitted to register as experts, while five years' practical experience will be required of graduates of technical institutions before they can register in this category.

FISHERIES

INVESTIGATION OF FISHING INDUSTRY IN KIANGSU: According to the Chinese press officials of the Ministry of Agriculture and Mines visited coast districts of Kiangsu Province during July to investigate the fishing industry. They reported that there are over 2,000 fishermen on the South Kiangsu coast, and that very few of the more than 120 fishing boats are owned by the fishmerchants, who usually form partnerships and engage fishermen to do the work, the latter earning from \$80 to \$100 or more per season. The boats and nets are of the old type and not made to withstand bad weather or attacks from pirates, so that in either of these contingencies the poor fisherman usually loses his catch. The report recommends that officials should devise means for improving these conditions. The Ministry has divided this area into three districts and is planning to open a Fishery Industry Improvement Office in each.

COMMERCE

POSSIBLE DEVELOPMENT OF CHINESE SILK TRADE IN INDIA: In a report submitted to the Ministry of Foreign Affairs by Mr. Lu Chun-fong, the Chinese Consul-General at Calcutta, it was pointed out that the Indian silk market was being flooded with Japanese and French silks due to the Indian boycott against British goods. On account of unsatisfactory styles and designs Chinese silk products have failed on the Indian market in the past. The General Chamber of Commerce, instigated by the Ministry of Industry, Commerce and Labour of the National Government, has sent circulars to the Chinese silk merchants urging upon them the importance of sending delegates to India to investigate the requirements of the silk market with a view to developing the Chinese silk business there.

ONE-HALF SILK COCOON TAX REMITTED IN CHEKIANG AND KIANGSU PROVINCES: Complying with petitions from the Chekiang and Kiangsu Silk Merchants Guild, the Ministry of Finance has exempted half the taxes on the autumn crop of cocoons, and has provided that the other half of such taxes be used entirely for the improvement of sericulture in these two Provinces.



THE PEKING MAN *

BY

G. ELLIOTT SMITH

Readers of "The China Journal" will remember the very interesting articles by Drs. Davidson Black and A. W. Grabau on the discovery and its significance of the complete cranium of "*Sinanthropus pekinensis*," or the Peking Man, that appeared in our March issue, called the "Missing Link Number," along with other matter relating to the ancestry of man, so that the following report of the first pronouncement on the subject made by the well known English authority, Professor G. Elliott Smith, of University College, London, after seeing the actual specimens in Peking will be especially welcome. Professor Elliott Smith, as announced in our last issue, has been invited to Peking to deliver a series of lectures on the interesting subject of man's origin and evolution, and no better authority could have been called upon for the task he is now performing; while his pronouncements in support of the claims put forth regarding the discoveries made by the members of the Geological Survey and the Cenozoic Laboratory at Peking will set the final seal of scientific approval upon this important work, satisfying scientists the world over regarding its absolute validity.—ED.

* *

First of all I want to express to the directors of the National Geological Survey my profound gratitude for the invitation to visit Peking and for the privilege of seeing the impressive result of the work carried on under their supervision, surely the most significant achievement in geology and palaeontology the last decade has witnessed. Before my arrival in this fascinating city I had no conception of the magnitude of the Survey's achievements. Hence what Dr. Wong showed me came as a real revelation. Since then Dr. Young has allowed me to see the great collection of vertebrate fossils from Chou Kou Tien and to appreciate something of the vast labour and skill involved in developing and interpreting their significance. I should like to take this opportunity

* This is an authorized summary of a lecture given before the Geological Society of China at a public meeting in Peking on September 25, 1930.

of congratulating the Survey on the work its officers have accomplished under conditions of exceptional difficulty. The results of their devoted labours are certain to exert a far-reaching influence, economic as well as scientific and cultural, not only in China itself but throughout the world.

I need hardly remind you that my knowledge of the Geological Survey's work has in the past been the result of my interest in the fossil remains of man and the friendship with Dr. Davidson Black which I have enjoyed for many years. Hence, like the general public, the glamour of what I think is the most important and thrilling discovery of our early ancestry had blinded me to the true extent of the field work in geology and palaeontology, which was responsible for the finding of the Peking Man and for establishing his status as the best accredited, if not the most venerable, of our forefathers.

I hope that the interest aroused throughout the world by this in many respects unique event will direct fuller attention to the importance of the work now being carried on by the survey under the direction of Drs. Ting and Wong.

Perhaps you will allow me at the outset to give my impressions of the remains of *Sinanthropus*, with which I have just become personally acquainted. I do not forget that I am addressing those who are intimately acquainted with the fossils and have borne the heat and burden of the work in discovering, developing and interpreting them. But just as a mother who is fully convinced of the unique charm of her own offspring does not usually resent a stranger's expression of admiration, perhaps you will not think me tiresome if I try to explain why I regard *Sinanthropus* fossils as the most valuable and illuminating evidence of man's early history and associations that have yet been revealed. Some months ago I expressed this opinion after carefully studying the reports written by Dr. Davidson Black, Mr. Pei, Dr. Young and Father Teilhard de Chardin, as well as the illuminating writings of Drs. Grabau, Andersson, Bohlin, Zdansky and others. Now I know that what may have seemed extravagant language was really an underestimate of the vast importance of this discovery.

The conditions under which the specimens were found, the facts that the remains of several individuals were recovered and that they provided fuller data than either of their contemporaries in Java and England, and the thoroughness of the investigations all lent particular value to the work in Peking. Examination of the actual fossils, with the fresh information, as yet unpublished, which Dr. Davidson Black has given me, was a most thrilling revelation. The significance of the knowledge these impressive fossils provide far transcends even the sanguine hopes I had entertained. I have no hesitation in saying that the work which is being done here on the fossil remains of man really represent a revolution in such studies. In place of the shifting sands of such controversial and apparently incompatible material as *Pithecanthropus* and *Eoanthropus* afforded, we now have a solid foundation of coherent evidence upon which we can build a reliable edifice of knowledge of the earliest men at present known to us.

I should like to emphasize the fact that such a result could not have been attained (and the interminable controversies provoked in the past by similar discoveries avoided) if the work of investigating and recording every stage of the work had not been done with exceptional thoroughness and conspicuous insight, and set forth with proper restraint and sobriety of language.

The world has been so impressed by these considerations that it has accepted without question the interpretation the officers of the Cenozoic Laboratory have submitted. On this result the Geological Survey deserves the heartiest congratulations.

The special importance of the discovery of the *Sinanthropus* remains lies in the fact, not only that the material is more complete and abundant than that of either the Ape-man of Java or of the Piltdown Man and that its geological age and associations are unquestionable, but also because it reveals the extent of variation of a primitive human genus and links in intimate association the other two genera (*Pithecanthropus* and *Eoanthropus*), the features of which have hitherto been regarded as wholly irreconcilable with one another. Thus the evidence provided by the Peking Man enhances the value of our knowledge of the other primitive men, and confers upon it a value and inspires a confidence which hitherto have not been always admitted. It puts an end to the perennial controversies as to whether *Pithecanthropus* was human or simian, or whether the ape-like jaw of the Piltdown man could really be associated with his obviously human skull.

When Dr. Davidson Black submits his report on the beautiful cast he has made of the brain case we shall acquire a much fuller and more precise illumination of the nature of the primitive human brain than I had ever ventured to think possible. The evidence which this brain-shape will provide will throw a flood of light upon the organ which was responsible for conferring upon man his human qualities of mind and skill.

What I have been saying is well known to many of my hearers, but as modesty seals their lips, a visitor can perform a useful function by telling the world that the devoted team of investigators of the Cenozoic Laboratory of the Geological Survey has revealed to us for the first time in a way that carries conviction what our earliest ancestors were like and how they lived, and much information as to the factors involved in their evolution.

Whether or not this epoch-making event throws any light on the location of the cradle of mankind is a very difficult problem which I expect will provide material for many discussions during the next couple of weeks. Face to face with Dr. Grabau, Dr. Roy Andrews and Dr. Davidson Black, who favour the view that Asia witnessed the birth of the Human Family, it would be unpardonable if I were to shirk this issue. There is no conclusive evidence in favour of any of the various suggestions, hence there is a wide field for unhampered speculation. The fact that different early Pleistocene (or, as Dr. Grabau would say, Poicyere) men have been found as far apart as Java is from England and China, suggests that the common ancestor of all three must have lived a long time before

these fossils were deposited and that he must have been an active wanderer. Hence no one of these sites (in Java, England and China) necessarily has any intimate relation to the original home of mankind.

As two of the three genera (and the most primitive) were found in the Far East, you may ask why I still favour Darwin's suggestion of Africa as the cradle of mankind? Obviously it is a mere working hypothesis that may have to be discarded, if any valid evidence comes into conflict with it.

In Miocene times there were living in Northern India many different kinds of anthropoid apes, who were probably the ancestors of the modern apes and man. Believing that the chimpanzee, gorilla and the extinct ape *Dryopithecus* are much more nearly akin to man than the orang-utan and the gibbon, I am still impressed by the suggestion made by Darwin in 1871 that man's ancestors probably accompanied their nearer relatives when they wandered west from India towards Africa and Europe, rather than towards the East like the orangs and gibbons. This may involve nothing more than the possibility that somewhere in Persia or Turkestan the place may be found which would satisfy all our varied contentions. I think it worth while, however, by means of a provocative claim for Africa to open a discussion which may let fresh light into the dark corners of my own mind, if not into yours.

In the subsequent lectures given to other audiences I propose to discuss other facets of the great problems of human history, the evolution of the human mind and its early expressions in action.

SOME CHINESE BIRDS OF PREY

BY

ARTHUR DE C. SOWERBY

Of all the members of the feathered world we see about us none hold a greater place in our interest, even if not in our affections, than the birds of prey, or *Rapaceae*, as naturalists used to class them. A hunter himself, man cannot but feel a certain very definite sympathy for the hunters of the orders of life lower than himself, even when, as in the case of gamekeepers, poultry farmers and the like, he wages a war of extermination upon them.

Who can help a feeling of admiration for the falcon as she stoops to her kill, the fierce chase through the air, the headlong swoop upon her unfortunate victim, the terrible downward blow of her talons as she flashes past just above it, rising high into the air again ere she turns and dives once more to catch its crippled, fluttering form before it reaches

the possible shelter of reed-bed or thicket? And how we all despise the kite because she is a coward and lives the life of a scavenger instead of that of her fierce marauding cousin the buzzard, for which she is so often mistaken?

The feminine pronoun is used here for a very good reason. Owing to what may be called a prevailing rule as regards the sexes, we generally consider the attributes of size, strength, courage and fierceness to belong to the male of the species, but strangely enough, amongst the birds of prey it is the female that is always the larger, stronger, fiercer and more courageous. And the reason is not far to seek. Her young are just as voracious as those of any other bird, and have to be provided with a liberal supply of flesh. This naturally can only be secured by the chase, and we can imagine the predicament she and her family would be placed in if they had to depend for such food on a shiftless, gad-about male. She must be able to devote long hours to the chase, and to tackle whatever comes her way. If her mate assists in this matter of feeding the



The Scops Owl (*Otus scops japonicus*).

SOME CHINESE BIRDS OF PREY

family with fresh, raw meat, so much the better, but she has to be in a position of independence regarding his help.

He retains the handsomer plumage as is the case with most birds, since, doubtless his fierce mate, like so many of the so-called gentler sex, has an eye for a smartly dressed male, but otherwise she has usurped all the masculine attributes.

Perhaps we are being a little hard on the males of the birds of prey, for we are bound to confess that whenever we have had the opportunity of watching a pair of such birds rearing their young, the male has at least appeared just as busy and solicitous for the welfare of his progeny as his mate. Still, the very nature of the food required suggests the need of a safeguard, or insurance, and that is provided by the extra strength and courage of the parent presumably with the strongest parental instinct.

In China we have a goodly array of birds of prey, including, as we here do, the members of two widely separated groups, which used, however, to be classified together. These are the *Accipitres*, which include the vultures, eagles, hawks and falcons and the *Striges*, which include the owls.

The fact that the members of both these groups or orders of birds are armed with sharp, curved bills and powerful claws or talons, and that they live upon flesh which they mostly obtain by hunting, does not mean that they are in any way related. They are not. The falcons and their kind actually approach nearer to the wild fowl and game birds, while the owls belong to a great group of birds in the majority of which the toes are arranged two pointing forward and two backward. Thus they are actually nearer to the woodpecker, cuckoos and parrots, as well as to the nightjars and swifts, although the toes of the two last are not arranged as stated above. To the non-scientific observer this may be hard to credit, especially when he is confronted with one of the hawk owls, some of which are so hawk-like in their appearance and movements as to be almost indistinguishable except in the hand. But this provides us with a fine example of parallel development. Because two widely separated groups of birds took to the same kind of food they began to converge in their general form and appearance. And incidentally it may be mentioned that those, like the hawk owls, which came closest to the falcons and hawks in their habits, that is to say, became diurnal and took to hunting by daylight, have approached most closely the falcons and hawks in outward appearance.

This last type of bird is represented in China by the little Japanese hawk owl (*Ninox scutulata*), a rather small, compact, dark brown bird with a light breast strongly streaked with brown. It is more slender than most owls, and does not possess the soft, almost fluffy plumage so characteristic of the group, but rather the hard, smooth feathers of the hawks. In Manchuria occurs the much larger, rather falcon-like Siberian hawk owl (*Surnia ulula pallasii*), whose breast plumage is barred like that of male goshawks, sparrow hawks and peregrine falcons.

The largest of the owls in China is the great eagle owl (*Bubo kiautschensis*), a huge bird with pronounced "ear" tufts; while there are two or three contestants for the distinction of being the smallest, namely

the little scops owl (*Otus scops japonicus*), the Manchurian barred owlet (*Glaucidium passerinum orientale*) and the collared owlet (*G. brodei*) of Fukien and South China. These diminutive species are just as fierce as their larger cousins, possibly, in proportion to their size, more so; for they attack and kill surprisingly large birds, birds which it takes them all their time to lift.

The two commonest owls in China are undoubtedly the long-eared owl (*Asio otus*) and the short-eared owl (*Asio flammeus*), both of which are migrant species, and are found all over the country. They are the kinds so often encountered by sportsmen out shooting, especially in marshy districts, which they frequent in order to prey upon the migrating birds.

The so called little owl (*Athene noctua plumipes*) is common all over North China, especially in the loess country, while its near relation, Whitelaw's owlet (*Glaucidium cuculoides whiteleyi*) is common in the Shanghai district and neighbouring regions. This is the bird so frequently put out of bamboo and other cover when beating for pheasants, woodcock or bamboo partridges. At night its twittering call may be heard in the outskirts of the International Settlement of Shanghai, while it may even be found in some of the gardens much further in.



The Short-eared Owl (*Asio flammeus*)

SOME CHINESE BIRDS OF PREY

Less common in China are the wood owls, large species which occur only in forested areas, the China representatives being *Strix aluco ma*, *S. a. harterti*, and *S. uralensis davidi*, and the Manchurian form *S. u. nikolskii*.

In Fukien and South China two or three specimens of a true screech owl or barn owl (*Tyto longimembris*) have been recorded. These belong to one of the common types of the British Isles, but are very rare in China. Its range is from Southern Asia to Southern Australia, covering the Malayan Archipelago, but not new Guinea.

Turning from these night birds to the daylight birds of prey, it may be stated at once that these are probably far better known to the average man because more often seen. They are far more numerous than the owls, both as to species and individuals, and it is impossible here to give anything like a comprehensive account of them.

The vultures are represented by the great cinereous vulture (*Vultur monachus*), and the equally large lammergeier (*Gypaëtus barbatus grandis*), the former being a lonely, universal wanderer, whose range extends all the way from Spain to Manchuria, and the latter being confined to only the highest mountains of North China, although its range also extends from Southern Europe. These are by far the largest of all the birds of this great order in this country, and are only excelled in size by the condor of South America. They have a wing span of eight to nine feet. Next to them come the imperial eagle (*Aquila heliaca*) followed by the golden eagle (*A. chrysaëtus daphnea*), the latter being fairly common in mountainous regions, especially in North China. There are many other eagles and eagle-like birds, including the sea eagles, in China besides these. They, as well as the vultures, belong to the eagle and hawk family, *Aquilidae*, the members of which are mainly distinguishable from the falcons, or *Falconidae*, by their shorter, more rounded wings. Classed with them are the kites, buzzards, goshawks, sparrow hawks, harriers and so on. A well known bird in the country accessible to Shanghai sportsmen is the white-headed buzzard (*Buteo ferox hemilasius*). During the spring, autumn and winter, specimens of this fierce but somewhat slow and clumsy marauder are always to be seen on the walls of Chapu and other towns along the coast. They not infrequently snatch the game shot by sportsmen. The black-eared kite (*Milvus lineatus*) is everywhere common in China, even in densely populated towns, where it nests, along with rooks, magpies and other birds, in large trees. It may sometimes be seen in great numbers on migration, although as much a resident as a migrant. The little sparrow hawk (*Accipiter nisus nisosimilis*) is very common everywhere. There are several other species of sparrow hawk in China, but this appears to be the commonest. It is very like in general appearance its big cousin the goshawk (*A. gentilis schvedowi*), a favourite bird with the Chinese falconer. All sportsmen are familiar with the long-legged hawks of marshy districts popularly known as harriers, of which several species occur in China. While on this family we must not omit to mention the osprey (*Pandion haliaëtus*), or fish hawk, as it is often called, a large bird about the size of a kite or buzzard, with rather marked black and white



The Hobby (*Falco subbuteo*).

plumage. It lives entirely upon fish which it catches by swooping upon them as they come to the surface to feed. This is not a very common bird.

By far the fastest fliers and fiercest of the diurnal birds of prey are the falcons, of which several species occur in China. The largest of these is the sacer falcon (*Falco cherrug milvipes*), a brownish bird more or less speckled with white. Next comes the Eastern peregrine (*F. peregrinus calidus*), an inhabitant usually of mountainous country, high up on the cliff-faces of which it builds its large nest. Shanghai residents have recently been interested in a young male of this species which has taken up its residence on the clock tower of the new Customs Building. This area is certainly not within the peregrine's usual beat, and our specimen is probably a stray or a left-over from the migrations.

SOME CHINESE BIRDS OF PREY

A bird of considerable interest is the hobby (*F. subbuteo*) of which at least three subspecies occur in China. It may be described as a smaller edition of the peregrine, of which the merlin (*F. columbarius insignis*) may be considered a miniature. Another interesting species is the Amur red-footed falcon (*F. vespertinus amurensis*), a pigeon-grey bird with rufous under parts and orange-red legs that breeds in North China and Manchuria and winters in South Africa. Several species of kestrel, well known for their habit of hovering in mid-air while they scan the ground for their prey, occur in China. Of these the Chinese kestrel is known as *Falco naumanni pekinensis*, there being three other subspecies of the common kestrel (*F. tinnunculus*), all of which differ from the foregoing in having the upper wing a reddish-fawn colour instead of grey in the male, the females being barred and speckled brown.

Finally we come to the smallest of all the diurnal birds of prey, the little black and white falconet (*Microhierax melanoleucus*), which is no bigger than a thrush, but is as fierce a marauder as one can wish to come across. It is confined entirely to South-east and South China, and is far from common.

SCIENTIFIC NOTES AND REVIEWS

MIGRATION NOTES FROM SWATOW: The following bird notes taken during July and August by a correspondent, Mr. J. W. Galuin, at Swatow, may prove of interest to some of our readers.

The koel (*Eudynamis scolopaceus*) arrived in the second week in July. Its excited but irritating call foretold the arrival of the hot weather, though the bird's stay was short, a week only. At this time, in the early morning, in small flocks could be seen the little avadavat (*Amandava amandava*). These birds are quite tame, allowing near approach, their rich crimson breasts and rather heavy beaks being easily noticeable. Before 8 a.m. they had disappeared for the day. Their stay lasted a fortnight.

On the 28th that fine songster the hua-mei (*Trocholopetrum canorum*) arrived and delighted early risers. About the size of an English song thrush, dull brown all over except for the white streak over the eye, it is difficult to locate. The song is prolonged, pleasant and variable. After the first week in August it was heard no more.

About this time and for a week only, the white breasted kingfisher paid a daily call. Another visitor still with us and rather noisy in the mornings is the rufous-backed shrike, his presence at first being strongly objected to by that still more noisy pest, the ordinary sparrow (*Passer montanus*).

The bulbuls are still numerous. Of others here, the dainty bright-eyed magpie-robin is most noticed. The orioles—golden and black-headed—prefer the shady groves on the Kakchih side, where they are known to the natives as the "Flying Mango."

Finally come the doves. These are the little red and the larger ring dove.

J. W. G.

Customs House,
Swatow,

September 1, 1930.

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HARDWICK'S HEMIGALE: Naturalists interested in the animals of the Malayan region are advised to refer to the *Field* of September 6, 1930, page 344, where will be found the picture of the remarkable civet known as Hardwick's hemigale, or *Hemigalus hardwickii*, which is a native of the Malay Peninsula, Sumatra and Borneo. In the account which accompanies the picture it is stated that the latter is of a specimen of this rare carnivore that has recently been acquired by the Zoological Gardens, Regents Park, London. The chief distinguishing character of this civet is the marking of its pelt, which consists of very pronounced, rather broad, dark, transverse bands, which give the animal a most peculiar appearance.

THE MALEO OF CELEBES: In our last issue in an article upon the fauna of the East Indies, we referred to a large bird found in the Island of Celebes called the maleo, and it is interesting to note that in the same number of the *Field* as mentioned above, and on the same page, is the picture of a young adult maleo (*Megacephalon maleo*) which has recently been received at the Zoological Gardens, London. The maleo, it appears, is confined to the Celebes and Sanghir Islands, though it belongs to a group of birds known as the *Megapoda* which are typically Australian. Other members of this group are the bush turkeys, or mound builders of New Guinea and Australia, so named because of their habits of building huge mounds of dead leaves, twigs and other material, in which the eggs of several females are laid in layers, covered over and left to hatch by themselves. The maleo does not build a mound, but on the contrary digs a pit in the sand of some beach, in which it lays its eggs, one every fortnight, till the regular quota are deposited, covering each in turn with sand, and leaving all to hatch out with the warmth of the sun. After the eggs are all laid the parent bird pays no more attention to them, the young, which are fortunately fully fledged when they hatch, having to fend for themselves. The maleo is a large bird very much resembling the gallinaceous birds of Asia and other parts of the world, to which it appears to be related in some respects, although its almost reptilian method of providing for its progeny suggests a primitiveness far removed from other birds. Whether it is really a primitive type or has merely retained this primitive instinct is a question, but the fact that it is a ground loving species and obviously belongs to the Australian fauna rather suggests the former.

DEATH OF FAMOUS BOTANICAL EXPLORER IN CHINA: Most people who have followed scientific exploration in China will remember the name of Henry Ernest Wilson, a famous botanist who spent many years in Szechuan, and who subsequently brought out a two-volume book called "A Naturalist in West China." After he left China he continued his botanical work at the famous Arnold Arboretum at Harvard, where he was known as "Chinese" Wilson. Here he published many important papers on China's flora. Recently he brought out a revised edition of his "A Naturalist in West China" under the title of "China, the Mother of Gardens," which was reviewed in this journal.*

It is with extreme regret that we receive the news of the death through a motor car accident of this able scientist and his wife on October 16 last at Worcester, Massachusetts. Only fifty-four years of age, Wilson was born in Gloucestershire, England, and was educated at the Royal College of Science, London. In 1906 he went to the United States as Assistant Director of the Arnold Arboretum, with which institution his name has been honourably associated ever since. His wide knowledge of the botany of China will render the place he occupied amongst naturalists a difficult one to fill.

METEOROLOGY

PORTENTS FOR A COLD WINTER: Without consulting the "Weather Clerk," we are venturing to suggest that there are not wanting signs that a cold or severe winter lies ahead of us this year. Of course, weather prophecies are always dangerous, but, on the other hand, there are generally some indications of what is

* China Journal, Vol. XI No. 2 p. 109

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in store for us in this direction if we can but read them aright. In the first place last winter was an unusually severe one in China generally and especially in Shanghai, though still a long way from being a record in this respect. Incidentally, this occurred in the year 1893, when in January a blizzard struck the China coast that was felt as far south as Canton, covering the whole country as far as Foochow and Amoy with several inches of snow, and almost blocking the Whangpoo with drift ice. The exceedingly low temperature for Shanghai of 8° F. was registered at the Shanghai Waterworks (10.4° F. at Siccawei). It is well known that weather phenomena come more or less in cycles, and not in isolated examples, so that it is not unreasonable to expect that this winter will approach last winter in severity, possibly even exceed it.

In the second place we have already experienced unusually cool weather, there having been hardly one warm day since the middle of September, and although the weather has been in the main clear and bright there has been a certain amount of unseasonable rain. The north-westerly blow and change of temperature that generally comes towards the end of October came earlier than usual, namely, on the 18th and 19th, instead of some ten days later.

Finally, in other parts of the world severe weather appears to have set in unusually early. Canada was swept by a blizzard on September 27, which lasted for twenty-four hours, covering the prairies with a blanket of snow. Two days later a heavy hail-storm devastated the prefectures of Shiga and Fifu in Japan. Of course, these instances occurred at places wide apart, but they all suggest the approach of an early and possibly a severe winter in the Northern Hemisphere.

Last spring we predicted a cool summer in the Shanghai area, and while we must admit that we were not altogether correct as to the actual temperatures that prevailed, the fact remains that the hot weather was of unusually short duration. It did not get really hot till after the middle of July and was comparatively cool again by the end of the first week in September.

THE TYPHOON SEASON IN THE FAR EAST THIS YEAR REVIEWED :

During July and August heavy floods were reported in China, Japan, Korea, Manchuria and Turkestan, while typhoons which swept over Canton, southern Japan and Korea early in July did great damage. Rivers near Kyoto, Osaka and Nara overflowed, inundating houses and thousands of ricefields. A *Shimbun Rengo* telegram of July 16 from Korea stated that 173 persons were killed, 126 injured and 108 missing, also that 659 houses were washed away, 3,810 collapsed and 25,346 were flooded. The damage to the crops was stated to be very great along the Peiping-Mukden Railway in Manchuria due to the overflow of the Neirho and Kuliho.

A second typhoon, less violent than the first, struck Japan along the coast of Kyushu on August 12, damaging crops, flooding houses and interrupting telephone and telegraph service.

From Mukden came a *Kuo Min* telegram on August 16 stating that within the Great Wall in the districts of Changli and Loting the Luan Ho overflowed, inundating these and other villages, and forcing flood refugees from southern Manchuria to move still further on.

In the Upper Sind, India, a *Reuter* telegram of August 4 stated that 200 square miles were flooded and Shikarpur evacuated, while in Karachi the streets were impassable on account of the inundation.

SEISMOLOGY

RECORD OF RECENT EARTHQUAKES AND VOLCANIC ERUPTIONS :

Whether it is merely a coincidence or has some deeper and more sinister significance, the fact remains that the forces that agitate the earth's crust from time to time, resulting in earthquakes and volcanic eruptions, appear to have been particularly active during the past summer and autumn. Most of the well-known earthquake areas of the earth appear to have been affected, the only ones to have escaped being those of the western coast of the United States and Alaska.

Thus early in June the crater of the volcanic island of Krakatoa began to show activity, a new vent opening up and continuing to erupt intermittently at least into September.

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On the morning of July 23 an earthquake took place at Naples at 1.10 a.m., lasting 45 seconds. It extended from this city to Bari on the Adriatic, south to Toronto in Apulia and west to Salerno in Campagna. Less severe shocks occurred in the same region on July 25. During this period Mount Vesuvius showed increased activity while Mount Pozzuolo erupted. The death roll was given as 2,142, later reduced to 1,475, with 4,551 injured and 60,000 people left homeless.

Pinotepa in the State of Oajaca, Mexico, was the scene of an earthquake on the night of July 24. There were no casualties, however.

Meanwhile in Kansu Province in North-western Kansu, a severe earthquake devastated a large area on the same night. The shock was felt at Lan-chou Fu, the capital of the province, waking the inhabitants and causing much alarm. Further details are lacking, but it will be remembered that this is the third bad earthquake this region has suffered in the last few years.

On July 27 a *United Press* cable from Santiago, Chile, stated that several volcanoes in Southern Chile were active, while outpourings of ashes and smoke accompanied by heavy rumblings were alarming the inhabitants.

On August 4 a terrific earthquake rocked the north-eastern part of the Caspian Sea littoral, completely destroying the towns of Chapazoo and Uriteky besides numerous villages. The casualties were very great, over 500 bodies having being extricated from the ruins, and 4,000 people being injured, as well as tens of thousands being rendered homeless.

The same day a slight shock was felt in the towns of Melfi and Rionero in Basilicata Province, Italy.

On September 11, Mount Stromboli, in the Mediterranean off Sicily, suddenly erupted with great violence, while the Island of Lipari was rocked by an earthquake. This was followed next day, September 12, by an earthquake shock in the Isthmia district of Corinth, Greece. On September 12 a message from Tokyo announced that the volcano Mount Asama, near Karuizawa, one of the former city's resorts, was in eruption, and a score of earthquakes a day were being felt in the Izu Peninsula, while the giant geyser in Atami had suddenly become active.

On September 14, several houses in the villages of Sophike and Almira in Greece collapsed as the result of an earthquake shock.

October 3 witnessed a severe earthquake which devastated a large area of approximately forty square miles near Teheran, the capital of Persia. As communications were interrupted no details were available, nor does any further news of this disaster appear to have come to hand since.

Next, early in the morning of October 8, three strong earthquake shocks were felt in numerous towns and cities in South-west and South Germany, the Tyrol and Switzerland, though little damage and no casualties resulted.

Finally, on October 17 at dawn an earthquake occurred in Chile, where in the interior between the sea-ports of La Serena and Valdivia, about 700 miles apart, one woman was killed and sixteen people injured. The inhabitants of Santiago, the capital, fled panic stricken to the parks and open spaces.

This series of seismological disturbances appears to be somewhat of a record for so comparatively short a period, and it would be interesting to know if seismologists attach any special significance to it.

ASTRONOMY

THE RECENT ECLIPSE OF THE SUN: From news received it is evident that the expedition of American scientists to Niafoon or Tin Can Island, which lies between the Samoan and Fiji Islands in the Southern Pacific, to take photographs and make observations of the sun during its total eclipse lasting only 93 seconds on October 21 was entirely successful, the sky being clear at the time and there being a noticeable lack of earth tremors usual to this small volcanic island. The fifty or so tons of scientific equipment for the work of the expedition, including one of the largest cameras in the world, were under the charge of Commander C. H. J. Keppler of the United States Navy, the expedition being sponsored by the United States Naval Observatory, assisted by scientists from Swarthmore, Ohio Wesleyan and Virginia Universities.

SCIENTIFIC NOTES AND REVIEWS

SUNSPOTS, FLOODS AND DROUGHT: That the great Mississippi flood of 1927, the unusual cold of 1928 and 1929, and the drought in America and excessive heat elsewhere in the world of 1930 are directly attributable to the occurrence or otherwise of sunspots, constitute the tentative findings of Captain T. J. J. See, retired Professor of Mathematics in the United States Navy, who has been working on the problem for the past ten years, states a *United Press* message appearing in the *North-China Daily News* recently. It is claimed (1) that it has been proved that when sunspots are most rapidly increasing the earth is unduly chilled, and the upper currents of its atmosphere descend so near its surface that floods, storms and hurricanes result, as in 1927; (2) that the maximum of sunspots in 1928-29 was thus followed by the severe winter of 1928-29 in which all countries suffered, Europe the most; and (3) that a diminution of sunspots in June, announced by the Talence Observatory in France, was followed by too much heat in July and hence drought. It is hoped that in time adequate data will be secured for the establishing of sunspot ratios which will give more ample warning of impending changes in weather conditions than can be obtained at present. Indeed, it may be possible some day to tell months ahead what these are going to be and so make it possible to take adequate measures against such catastrophes as floods and drought in sufficient time to minimize their adverse effects. Such advanced information would be of inestimable value to China, provided the country had a Government capable and willing to make use of it.

MEDICINE

PLAGUE EPIDEMIC IN NORTH SHENSI: A *United Press* report dated September 30 gives details received from Dr. Elmer W. Galt of Fen-chou Fu in Shansi (not in Shensi as reported) of the outbreak of the plague in both its bubonic and pneumonic forms in the neighbouring province of Shensi, where in the northern section it has, apparently, been raging for some months. It commenced in Hengshan Hsien, whence it spread to An-ting Hsien, Shui-teh Chou and other counties. The inhabitants of many hamlets have been wiped out, while owing to the panic which has caused a general exodus from the towns and villages in the affected areas, the bodies of the victims of this dread disease have in many cases been left unburied. While local officials are in some cases carrying out investigations and policing by way of precaution, they are ignorant of effective measures to stop the spread of the plague, which thus becomes a menace to the whole of North China.

As pointed out by Dr. Wu Lien-teh recently, this year is a critical one in regard to the plague in these parts, it being the cycle year for this disease, which has a periodical maximum intensity and virulence every ten years. In 1910, as the whole world knows, an extremely severe outbreak occurred in Manchuria. In 1920, another outbreak occurred, but was promptly dealt with and prevented from becoming the serious thing the 1910 one was. At or about the same time, a very serious epidemic broke out in North Shansi and the area to the north of the great loop of the Yellow River which encloses the Ordos Desert. This, too, was prevented from spreading eastward, and was finally checked. Since then outbreaks have occurred in North-west and West Shansi along the banks of the Yellow River, believed to have originated by infection brought down by cargo boats from further north in the Mongolian border region. The area now effected lies to the south of the Ordos Desert, and west of the areas in Shansi just mentioned, so that it may really be considered as part of the whole general region.

Under the circumstances it is obvious that something should be done by the Chinese Government to maintain a Plague Prevention Bureau somewhere in this region, as it does at Harbin in North Manchuria, with an efficient staff capable of dealing immediately with any outbreak that may occur.

While the pneumonic plague is generally associated in people's minds with Manchuria, it is in reality a disease that belongs more truly to the Mongolian type of country, where, apparently, it is endemic amongst the marmots, or *tarabagan*, as they are called by the Mongols. These are large rodents which carry good pelts in winter, and it is from sick specimens of these rodents that Chinese hunters, who do not know how to distinguish them from healthy ones as the Mongol hunters do,

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contract the disease, and then, returning sick to their homes, start the epidemic on Chinese soil.

Dr. Galt points out that according to data gathered by Dr. P. T. Watson and others in past years, the danger of epidemic reaches its height in October and November, when the harvests have been gathered from the fields and rodents have come to the threshing floors and villages with the grain. He thus seems to suggest that the rodents that come to the villages during these months are responsible for spreading the plague, but it should be noted that such rodents as do come to the villages at this period are not marmots, but various species of field mice and hamster rats and mice, none of which, as far as we know, have so far been convicted of carrying plague themselves or plague-infected fleas. At best, we believe, it is only claimed that evidence points to these rats being the carriers.

This only goes to show how necessary it is that a thorough investigation of the plague epidemics in this region should be carried out by experts under Government auspices.

PLAGUE IN MANCHURIA: From all accounts the epidemic of pneumonic plague which broke out in the Taonan district of West Manchuria, and which in September was reported to be spreading rapidly, has been brought more or less under control by the Manchurian Plague Prevention Service.

BUBONIC PLAGUE IN INNER MONGOLIA: Latterly news has been received that bubonic plague has been raging in the Tungliao district in Inner Mongolia, where, according to Dr. Wu Lien-teh in an interview given to the representative of the *North-China Daily News* and appearing in that paper on October 1, cases were being reported daily. As under a hundred cases had been reported, however, and it was the bubonic and not the pneumonic form of the plague, which is supposed to be carried by rats, it was hoped that as the cold weather came on and the rats went under ground, the epidemic would die out. It is to be hoped that this will prove to be the case, but our experience in these parts is that the rats that infest human habitations do not disappear from the latter in winter, but rather the reverse, using them as their winter residences, and only going to the fields during the summer.

HEALTH EXPERTS VISIT SHANGHAI: Organized by the Health Section of the League of Nations, a party of members of the various administrations engaged in port health work in the Far East under the direction of Dr. C. L. Park, head of the quarantine service of Australia, arrived in Shanghai during August. The party had visited the Dutch East Indies, the Straits Settlements, French Indo-China, Hongkong, Manila and Canton before coming to Shanghai, and thence went on to Japan, spending an interesting and profitable time in comparing methods of fumigation and harbour quarantine codes, with a view to decreasing the propagation of diseases from one country to another by quarantine methods.

GOVERNMENT DESIGNATES WUSIH "EXPERIMENTAL DISTRICT" FOR PROMOTION OF LABOUR HYGIENE: On account of its ranking as one of the most important industrial centers of Kiangsu Province and its proximity to Nanking, the National Government during the past summer named Wusih as the first "Experimental District" for the introduction of modern sanitation and hygiene among the factory workers. Under the direction of the Ministry of Public Health and the Ministry of Industry a local committee of eleven members chosen from the leading industrialists of the city was appointed. This action marked the beginning of a new era for factory hands in China, as the interdependence of capital and labour in the increased output and efficiency of labour working under good conditions has been proved many times in the modern industrial world.

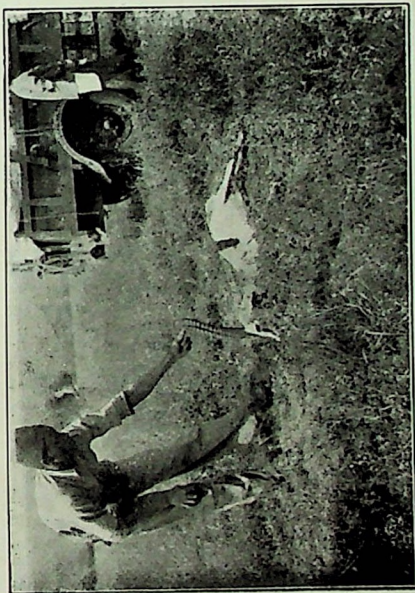
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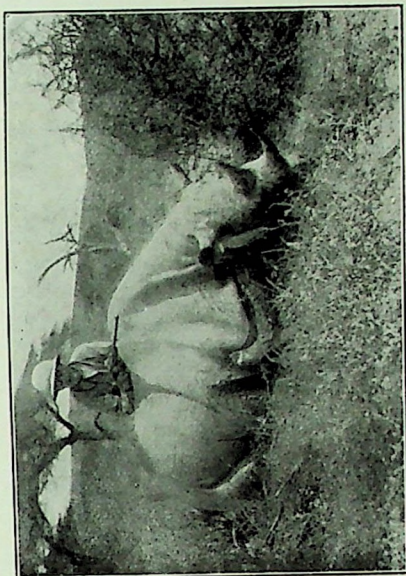
A Grant's Gazelle.



A Buffalo with Horns of 46 inches Spread.

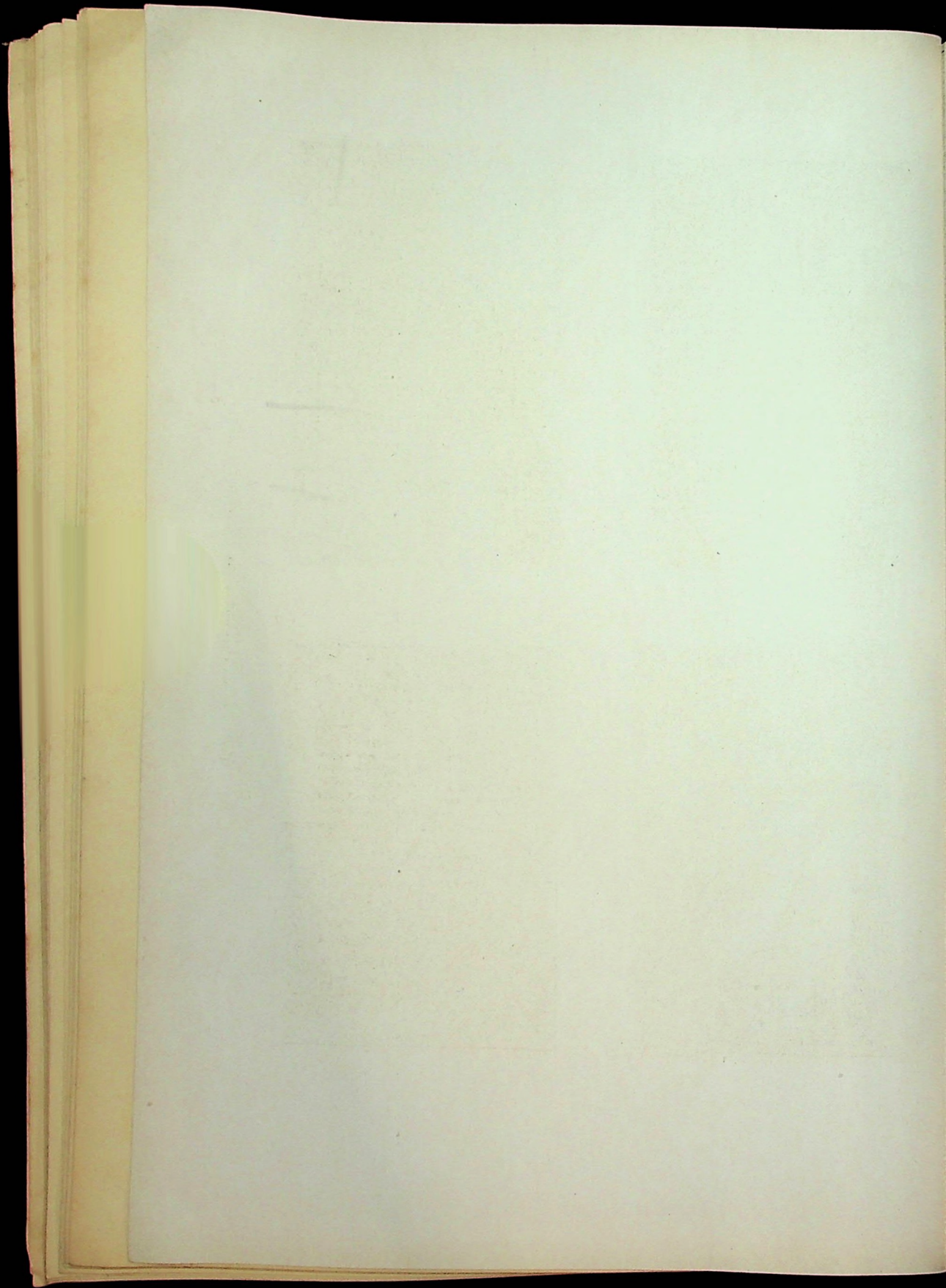


A Thompson's Gazelle.



A Rhinoceros with 15 inch Horn.

Part of Mr. C. D. Dixon's Bag in Kenya, East Africa.

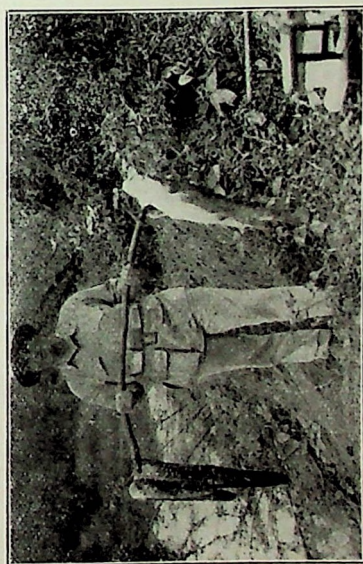




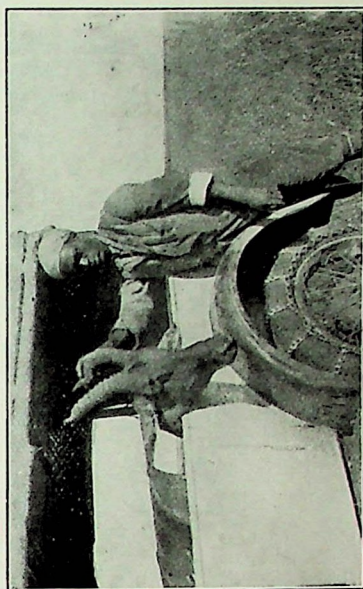
A Lion Cub,



A Wildebeest or Gnu.

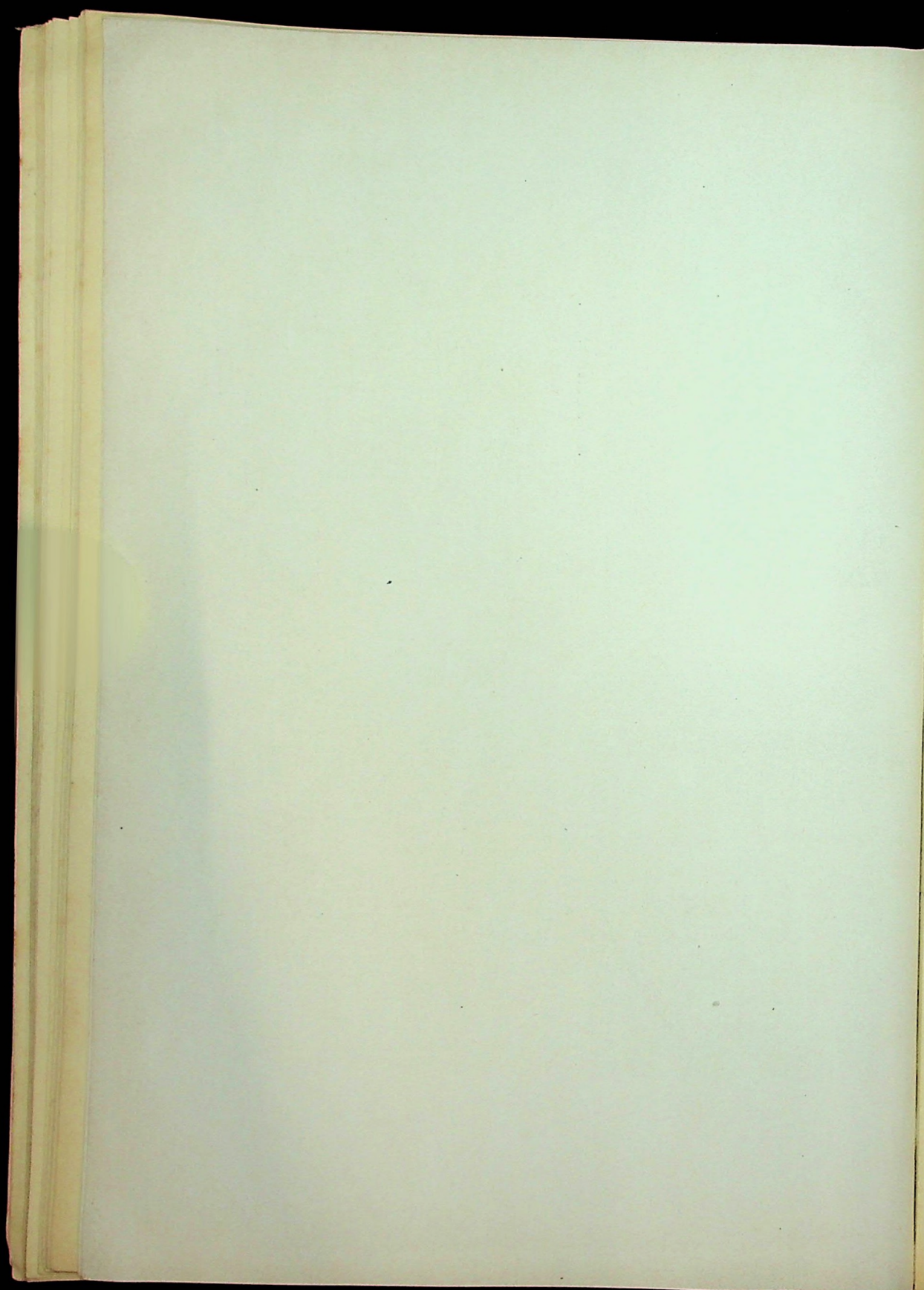


Rhino Fish and Giant Eels.



A Topi.

Part of Mr. C. D. Dixon's Bag in Kenya, East Africa



SHOOTING AND FISHING NOTES

SHOOTING

CHINA HAND ON SAFARI IN KENYA COLONY: In our August issue we gave a few particulars of a hunting trip in Kenya Colony, East Africa, undertaken by Mr. C. D. Dixon of Mackenzie and Company, Shanghai, who has spent many years in China, mostly in Szechuan, and we informed our readers that we expected a full account, together with pictures of his trophies, from Mr. Dixon, which we promised to publish. These have now been received and we have much pleasure in presenting them to our readers. Mr. Dixon in a letter to the Editor says:

"I enclose a selection of the photos I took on Safari and wish they were better, but I was more concerned with shooting than photography as you can imagine! . . .

"My safari was wonderfully interesting and remarkably successful. The following is a list of my bag:—

1 Lion (9-ft. 7-in. over all, yellow maned)	2 Fennic Foxes
1 Rhinoceros (front horn 15-in.)	2 Zebra
1 Buffalo (horns 46-in. spread)	1 Wildebeest
1 Hippopotamus (weighed a few tons!)	1 Grant's Gazelle
1 Cheetah (6-ft. 6-in. over all)	1 Reedbuck
1 Duiker	1 Bush Buck
1 Thompson's Gazelle	2 Dik-dik
2 Oryx (32-in. horns)	1 Greater Bustard
2 Impalla	3 Koran
2 Topi	1 Wart Hog

and in addition several guinea fowl and other birds for the pot.

"I was not after slaughter and so was content with one of each species, except when required for food for the safari. Altogether I saw seven lions and ten rhinos. I fired at three lions and one rhino. Twice I apparently missed a lion, once at 40 yards and once at 5 yards only.

"On the third occasion I was walking on the plain with my white hunter, Mr. Braunstrom, along a donga thickly fringed with thorn bush, about nine o'clock in the morning, when all good lions are usually resting up in the thick bush out of sight. But on rounding a clump of trees I suddenly saw a fine yellow lion sitting up in the grass 60 yards away, washing his face. He stopped and stared. I raised my mauser 9.3 m.m., and, aiming steadily, fired at his chest. He bounded away in two bounds down into the donga and apparently I had missed him. With more enthusiasm than prudence we followed him up into the donga and thick shrub and poked about trying to flush him, finally splashing through the stream and clambering up the other side onto the further plain. Turning out of single file into line abreast. Braunstrom on the left, myself a pace to his right, my gun-bearer Huseni a pace to my right and the assistant gun-bearer a pace to Huseni's right, we proceeded to walk alongside the donga, which was on our left and towards which our gaze was directed, hoping the lion might break cover, though we had really given him up. Suddenly from half right, fifteen yards away, behind some tall grass we became instantly aware of a snarling, growling roar, swelling to a great volume. We turned in time to see the lion charging slap at the centre of our little line. There was not an instant to do anything but raise my rifle, see the by now gigantic head of the infuriated lion along the sights and pull the trigger. In the instant that I did so and before I heard the discharge of my own rifle I heard a terrific bang on my left from Braunstrom's double-barrelled Holland and Holland .470, and the lion nearly fell backwards under the impact of the bullets, falling stone dead seven yards from the muzzles of our rifles. Braunstrom generously shouted out "Well done," thinking I had got my shot home, but in reality it was his as we found on examination. By a remarkable accident both barrels of his rifle had gone off simultaneously. Both bullets entered the lion's chest and penetrated to its back bone. Mine had missed, probably because the lion had commenced to collapse the instant before I fired, under the terrific double impact of Braunstrom's heavy rifle, which is really intended for buffalo and rhino. My first bullet at sixty yards had hit him slap through the upper lip, knocking out a tooth and lodging in the back of his jaw. He had been bleeding profusely in the grass where he lay

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waiting to charge us and was a very angry lion indeed. It was a mercy that Braunstrom's rifle did not burst. The discharge nearly knocked him over and sadly bruised his cheek and jaw bone. I am not at all sure my shot, even if it had hit the lion, would have stopped him. I probably owe my life to Braunstrom's intrepidity and quickness. Both gun-bearers stood steady as a rock and it is a mercy they did not panic or anything might have happened. Huseni is a very experienced gun-bearer, a Wakamba man, and was gun-bearer to the Duke of Gloucester when he was on Safari.

"I had numerous other adventures which I will tell you when I return. Especially one, when we went lion hunting with the Masai warriors. Make what use you like of the above notes and excuse haste."

SNIPES SHOOTING IN THE SHANGHAI DISTRICT: This season, as regards snipe shooting, appears to have been rather below the average, and we have heard of no good bags. All the more interesting, then, will be the photograph reproduced here of a good bag made by Mr. H. E. Gibson and Mr. E. Moller in the Yuhang Marsh, Hangchow district, a few years ago. This bag consisted of sixty couple and was made in the course of two and a half hours' shooting. The birds were all spring snipe.

GAME AND GUN LICENSES IN CHINA: We have noted with interest the correspondence that has appeared in the local daily press upon this subject, and although we appreciate the fact that nobody likes to pay for something they have always had free, we cannot altogether identify ourselves with the sentiments expressed by some of our local sportsmen. Some of these seem particularly bitter over the fact that the Chinese Government has imposed the game tax of \$30.00 at the request of the local native professional hunters. In the first place, we do not for a moment believe this to be the case. If our memory serves us aright, this was the figure stated when the question of shooting licenses first came up over two years ago. The gun license of \$2.00, was altogether a different matter, and, as far as we can see, many sportsmen have been shooting on a gun license instead of on the game license which the existing regulations regarding shooting in China call for.

In any case, even if it were true that the Government had imposed this tax on sportsmen at the instigation of the professional hunters, surely the latter have the prior right to consideration? After all, livelihood comes before sport, and, in the long run, game in a country like China primarily belongs to the people on whose land it is to be found. This is recognized in the United States and Canada, where the outside sportsman has to pay a far higher license for his shooting than the local residents or natives of the shooting district.

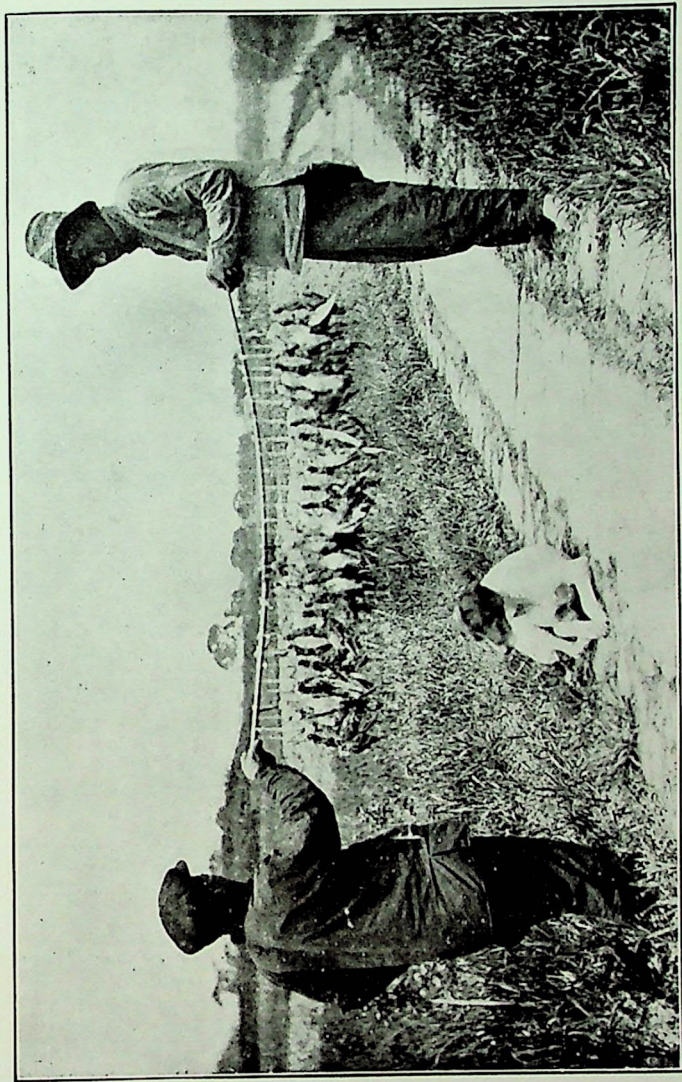
We naturally do not altogether approve of the native professional hunters' methods, but we must not forget that were it not for the market which we foreigners create by our fondness for game and willingness to purchase it even at the present advanced prices, there would be little encouragement for any native to waste powder and shot on the birds or the time he spends in trapping them. Correspondents to the local press would be spending their time and energies to much more effect if they tackled the question of control of the sale of game in local markets and the total prohibition of the export of game in any form whatsoever, instead of complaining about a shooting license, which, compared with that of any other country, is not in any way excessive.

Finally, under proper supervision and control, there is plenty of game in this country for all, sportsmen and professional hunters alike, and here we make an appeal to the Chinese Government to see to it that the valuable game reserves of this country are properly looked after.

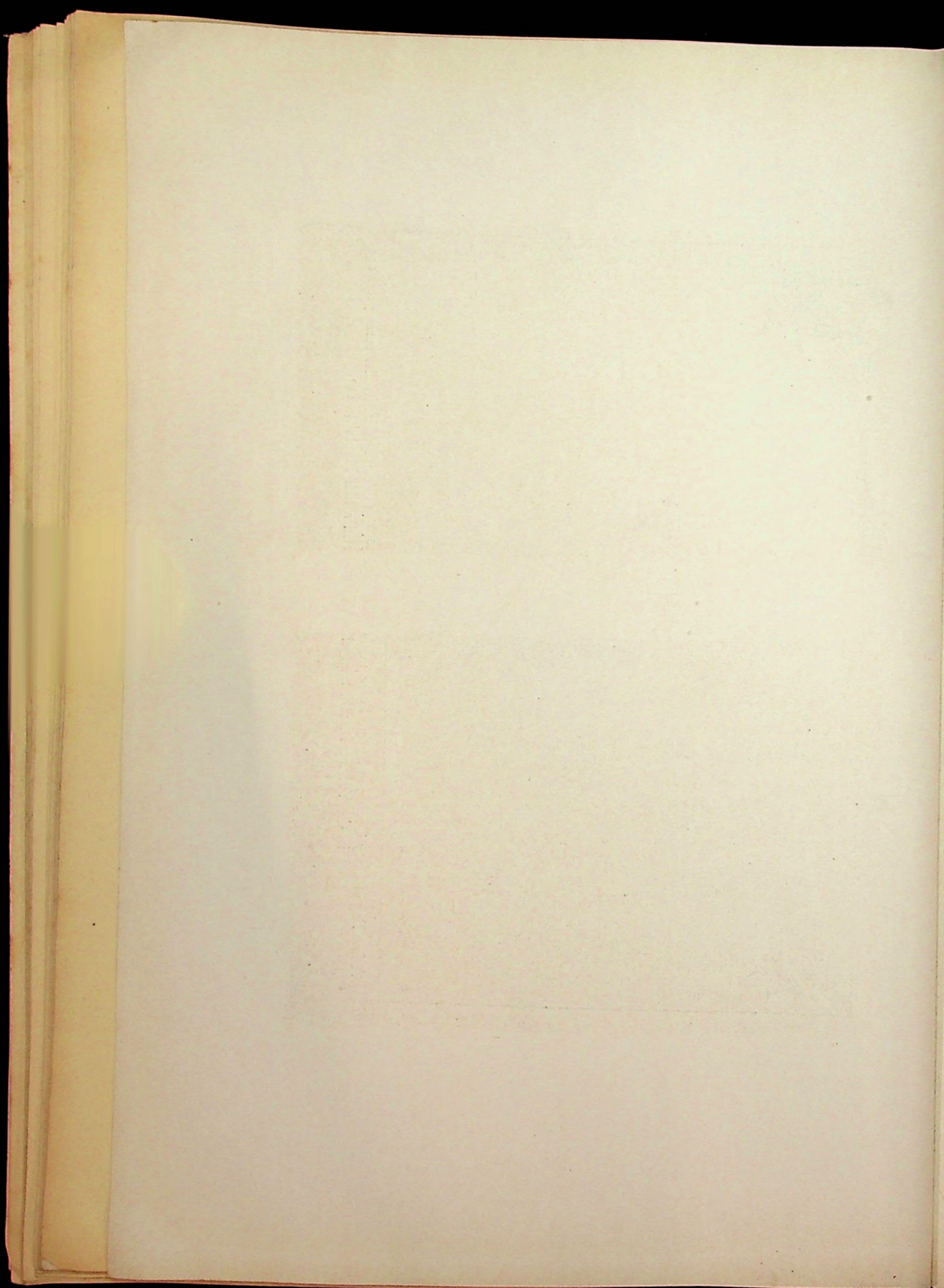
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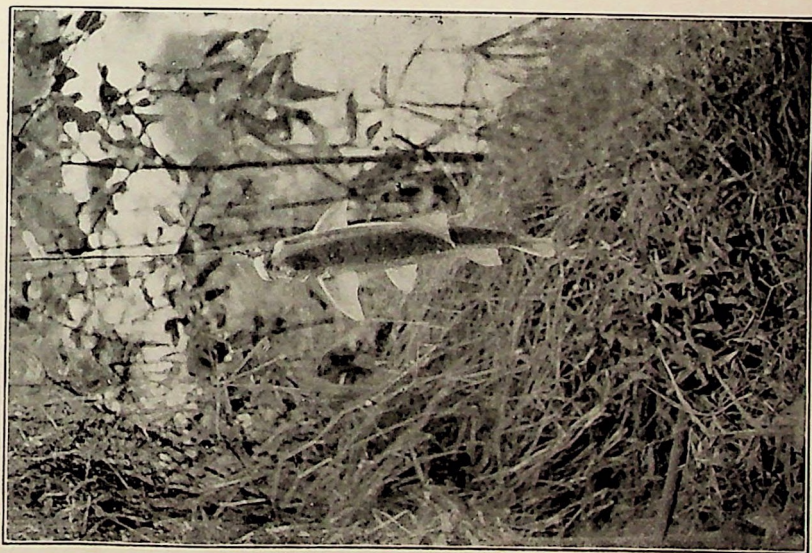
FISHING

FISHING IN KENYA: Though he did not mention it in his letter, Mr. C. D. Dixon while on Safari in Kenya appears to have enjoyed a certain amount of fishing,

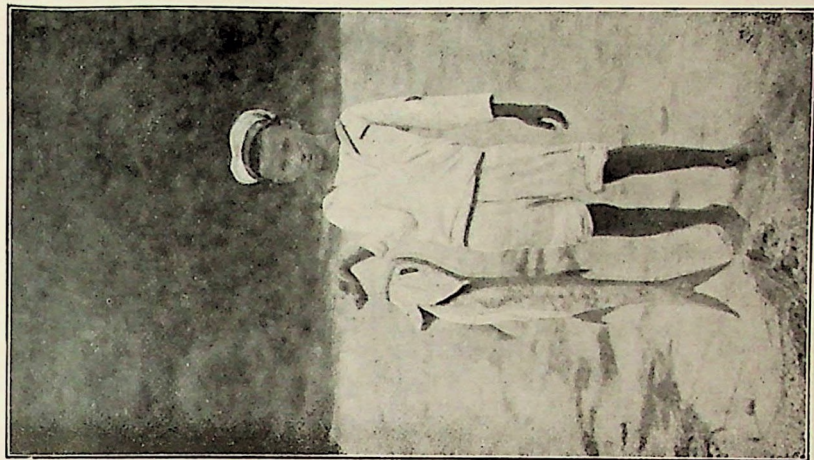


A fine Bag of Sixty Couple of Spring Snipe made by Messrs H. E. Gibson and E. Moller some years ago
in the Yuhang Marsh, Hangchow, in two and a half Hours' Shoot.

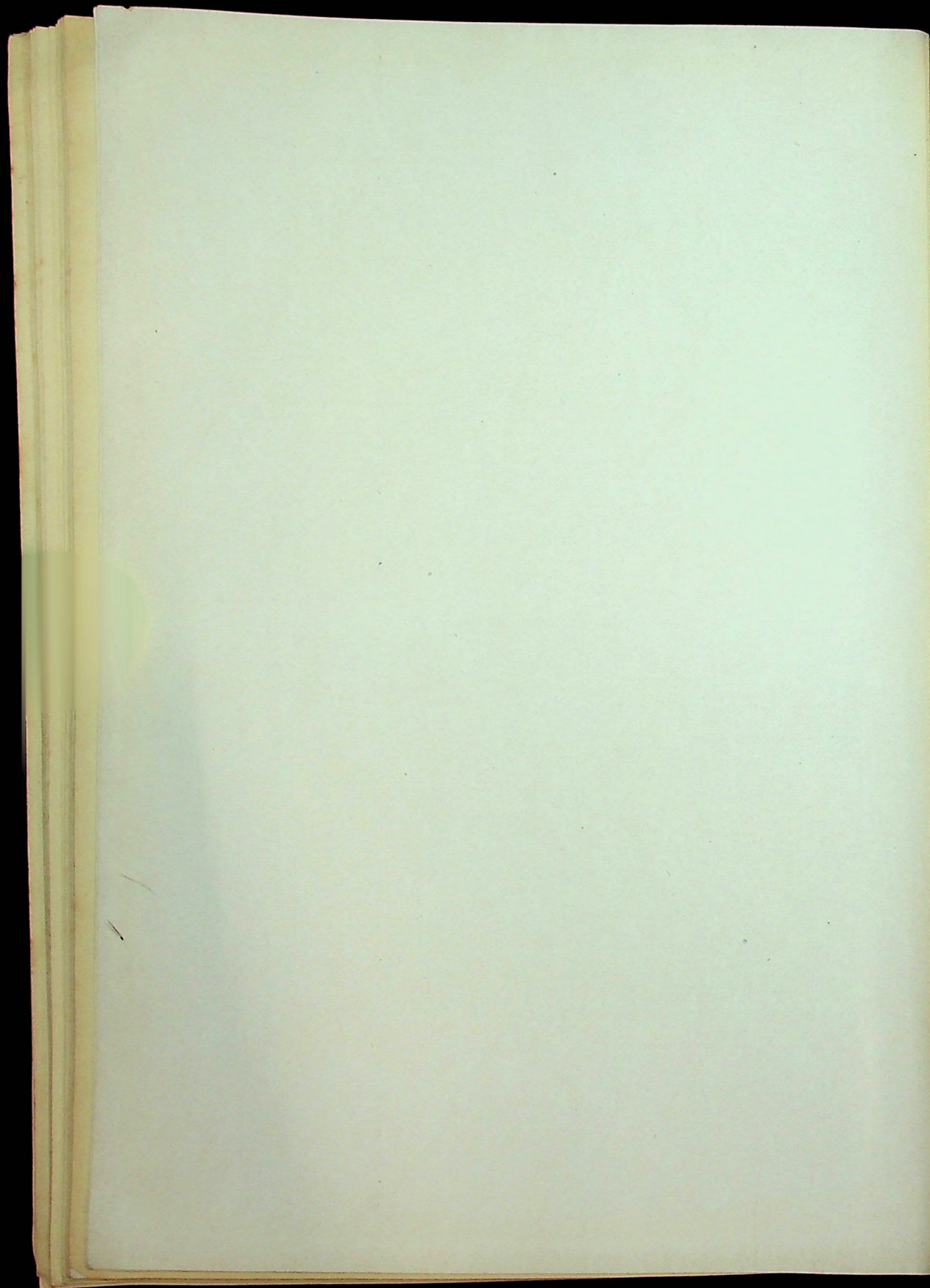




A 25 lbs. Rhino Fish taken by Mr. C. D. Dixon
in Tana River, Kenya, East Africa.



A large Bahmeen or Canton Salmon caught by Mr.
Adamson of Shewan, Tomes & Co., Hongkong, while
trolling last year with a 6 inch Spoon.



SHOOTING AND FISHING NOTES

if some of his photographs of fish caught in the Tana River are any indication. Two of these are reproduced here together with some of his pictures of big-game animals, and they show that the fish are at least of considerable size. One, a 25 lbs. rhinoceros fish is obviously a close relation of the carp, while two others are described as giant eels. We do not remember ever having heard or read anything about fishing in these parts, possibly because sportsmen who visit them are too busy with big-game animals to investigate the possibility of the minor excitement to be derived from the use of rod and line. At any rate it is obvious that big fish are to be had in the rivers of Kenya and that they will take a bait.

FISHING IN HONGKONG WATERS: In a letter from Colonel M. H. Logan, the following passage regarding the fishing to be had in Hongkong occurs. Evidently our correspondent, who is used to the fine fishing to be had in British Columbia, and also the good sea-bass fishing obtainable at Wei-hai-wei and other resorts of North China, does not think much of the sport in Hongkong waters.

"Here we have had a very wet autumn with rainfall 20 inches above the average, but the N. E. monsoon now appears to have set in. I have not fired a gun since I have been down here, and my sole attempt at sea fishing produced but a single specimen of the mackerel tribe and a long thin herring gutted sort of fish at that. I have heard of Bass, but have been unable to locate them. The sea fishing down here has been tried often but no European ever seems to have met with anything but partial success, one or two fish in many outings. I enclose a photo which you might care to have of a Bahmeen or Seer, called locally the Canton Salmon, which was caught on a six inch spoon trolling last year by Adamson of Shewan Tomes."

SEA BASS AT WEIHAIWEI: It was reported in the *North-China Daily News* of October 28 that Mrs. E. E. Clarke and Dr. Leo McGolrick had taken some twenty-one sea bass of a total weight of 72 lbs. during three hours fishing on the morning of the previous Saturday at Weihaiwei.

A. DE C. S.

THE KENNEL

WORMS IN THE HEART: Dog owners in China will be interested in the following correspondence upon that distressing complaint, worms in the heart, from which so many of the dogs of foreign breed in this country die. It is safe to say that the majority of sporting dogs in China sooner or later become infected with heart worms, and it seems practically impossible to prevent it. However, we cannot subscribe to the contention that there is no cure for this malady, as is claimed in the case of the similar disease occurring in the southern part of the United States in the letter by Mr. W. Fuller. We understand that cures are actually effected here in Shanghai, and our advice to all dog owners is that they should at once go to a reliable veterinary surgeon should they suspect their dogs of suffering from the complaint. Following are the letters referred to above:

A. G. Ray, Esquire,
Messrs. E. Lohmeyer,
7, Queen Street,
Cheapside,
London.

My dear Ray,

Airedale Bitch
Lady Rowena

Born 20th September, 1923

Died, 4th April, 1930, at Tientsin, N. China.

The following may be of interest to Col. Richardson.

Nell died yesterday of Worms in the Heart. She was cheerful and happy right up to the end of her life.

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Perhaps I had better write what happened on the day she died. (1) Out with me with five other dogs for exercise from 6.30 to 8 a.m.

Sent out with same dogs at 2 to 4 p.m. and on her return home she collapsed in the street near the French Park about 500 yards from her Home and was dead in a twinkling. Time about 4 p.m.

She was absolutely in the pink of condition right up to the last.

I suspected "Worms in the Heart" or "Heart Worms" as they are sometimes called in these parts.

I opened her up and found a few worms about the heart and in cutting the heart in two found it infested with them.

Description of these worms:—

They look like smooth pieces of white twine and vary on length from 4 to 9 inches.

I preserved the heart in Spirits of Wine.

It is said this disease is not known east (? west) of Suez. There were no intestinal worms and I had always dosed her every six months for this pest.

Nelly gave us four good litters and anyhow I think seven years is a very fair age for a dog in Tientsin with its stagnant water, filthy filth etc.

One has been told these Heart Worms start in the viens and arteries and work their way up to the heart.

In several cases I personally have experienced the end is practically the same and there is nothing to suspect anything is wrong until too late.

A doctor friend here thinks Neo-Salvarsan injections are a preventive. I am enclosing three copies of this report in the hope that you may be able to pass it to quarters where the experience will be helpful in the interest of Dogs.

I enclose prescription of a "supposed" cure for Heart Worms, but in *all* cases coming under my notice there was no time to try anything as the presence of Heart Worms are not suspected until they had reached the Heart, *i.e.* the condition of the dog being excellent actually until a few minutes before death.

I do wish I could give a more lucid description. With warm regards,

Yours sincerely,

N. COPPIN.

TIENTSIN, April 5th, 1930.

W. N. McL. Coppin, Esquire, M. C.,

c/o P. Heath and Co., Ltd.
Tientsin.

Heart Worms In Lady Rowena (Airedale).

Under date of April 5th, 1930, you sent the writer a personal letter enclosing a copy of a letter you had written under date of April 5th, 1930, to Lohmeyer, London re Heart Worms in dogs.

We sent this letter to Polk Miller Products Corp., and they were greatly interested in it. They wrote us that this Heart Worm infestation is like a similar disease in the southern states of our own country. It appears that the dogs down there drink swamp water and in doing so take in water mosquitoes which carry the eggs of the Heart Worm.

There is no treatment much less cure,—if the worms were killed in the circulating blood, they would form a thrombus, or plug, and paralyze the patient, or kill it.

Moreover, diagnosis, except by microscope, or post-mortem as your friend did, is the only way to find the worms.

The Rockefeller Foundation is working on the subject in humans, but no reports as yet.

The only suggestion that Polk Miller have is that the dogs should be prevented from drinking swamp or stagnant water or other water carrying water mosquitoes.

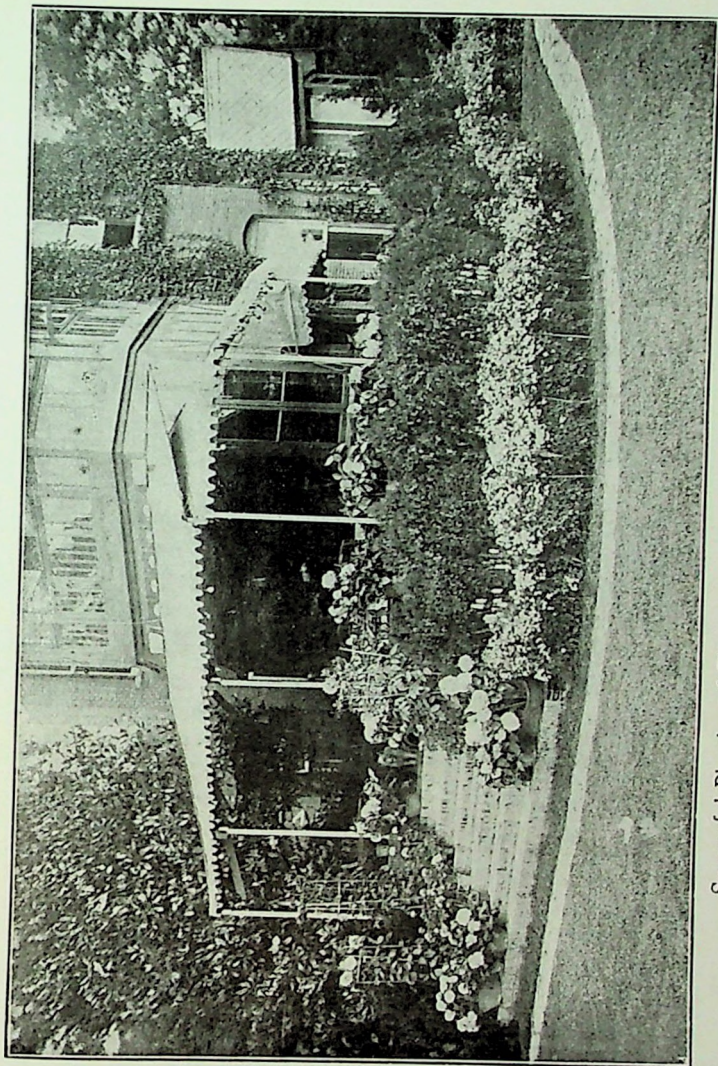
We appreciate the fine and clear description in your letter to Mr. Ray, London.

Very truly yours,

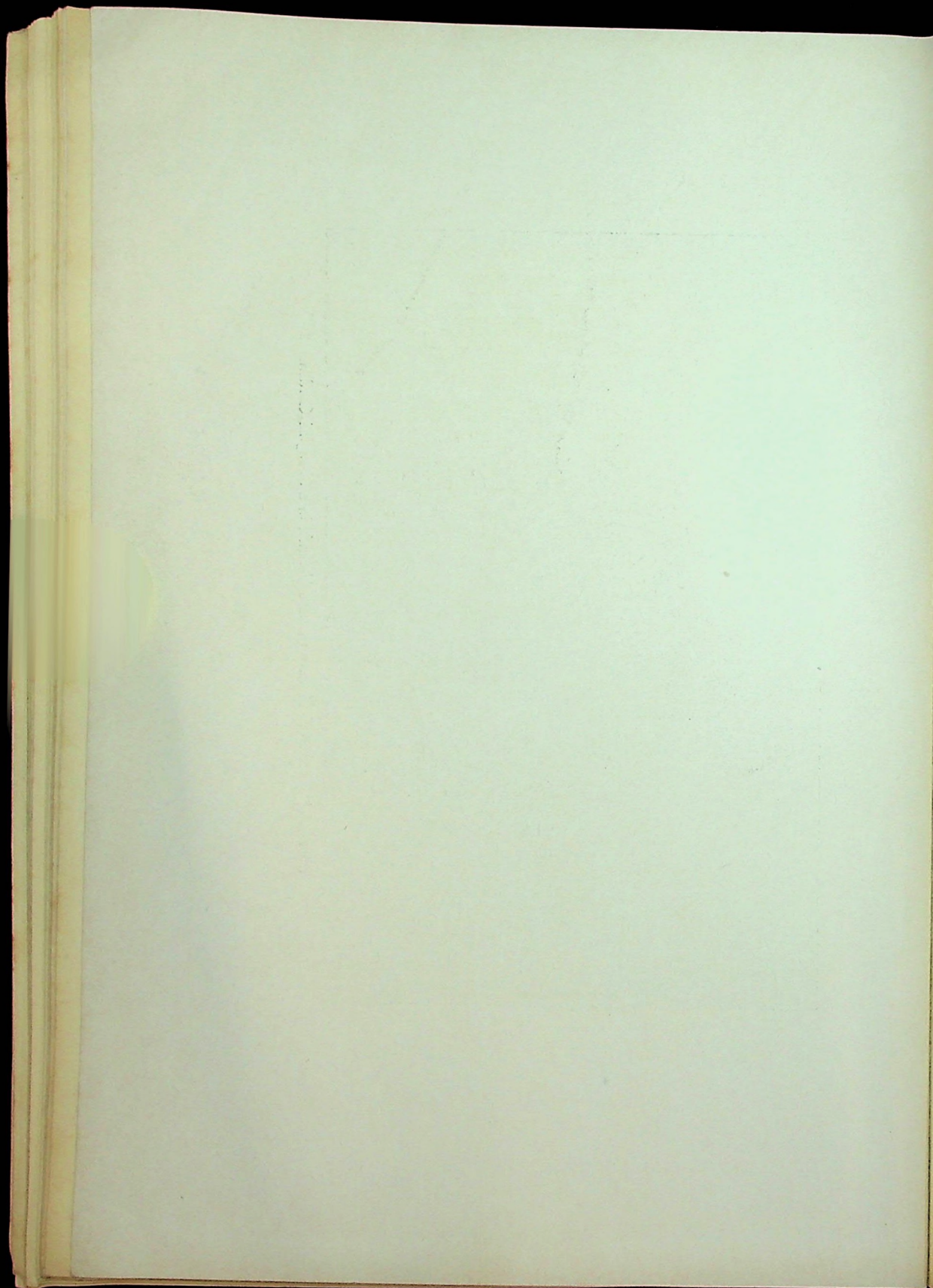
American Overocean Corporation.

(Signed) Ray W. Fuller.

New York, June 16th, 1930.



Successful Planting of Flowers round a Veranda in a Shanghai Garden.



THE GARDEN

OCTOBER TO NOVEMBER

CHRYSANTHEMUMS: Chrysanthemum cuttings were made last autumn. These were taken from the base of the parent plant, being small, two to three-inch shoots with a few young leaves attached. These shoots were planted in finely pulverized soil and protected from the sun and cold until they had developed roots. In spring they were set in beds well prepared with a layer of ashes and leaves, any mixture that would retain moisture and prevent the wilting of foliage.

The old plant root need not be thrown away even though it will produce smaller flowers next season, for it is useful in bringing colour to some otherwise neglected spot.

Chrysanthemums need sunshine: avoid dampness, and do not sprinkle the leaves. Water only the roots from October onwards. They begin to show their buds, some earlier, some later. To retard blooming place under cover, but the plant must have light. Dark sheds retard growth, but damage the colouring. Place a flowering plant in the dark when fully open to keep it fresh, but never allow it to develop without light. When the buds are set and swelling, powdered fertilizers can be sprinkled on the soil, but, if the buds are not formed, there is no need to push the growth. This would only lead to the production of soft wood. Chrysanthemums need space to develop, with air and light among the foliage, to be healthy.

The Chinese gardener is fond of training the branches to take on different forms, and, as a rule, he may be relied upon to care for these plants. He will spend hours during the hot summer months picking at the leaves and later at the buds, so that only even, strong buds remain on each branch. An amateur can grow about sixty blooms to one plant, but far larger and more numerous blooms are seen at the wonderful autumn flower show sponsored by the Shanghai Horticultural Society. These masses of colour and exquisite shades cannot be described. They must be seen to be appreciated.

BULBS: In planting our bulbs we must imagine the colourful effects they will produce in the spring. Flowering bushes as a background with gay tulips, narcissus, jonquils and snowdrops make a charming picture. The golden belled *Forsythia*, with its sweeping branches, can gracefully protect gay tulips, while the Chinese almond (*Prunus triloba*), with its dainty pink blossoms, like small roses, pressed against its stems, can act as a background for pink and lavender hyacinths. Under the *Deutzia scabra*, with its panicles of double white flowers, yellow jonquils would be charming. Another ornamental bush is the Judas tree. It has a mass of red-purple flowers set closely to the stem. The leaves appear after the flowers are over. The purple *Buddleia* blossoms in late spring and throughout the summer *Ranunculus* would be gay under it. All the flowering fruit trees, the peach, the plum, the yellow almond, the jasmine and, later, the crepe-myrtle, have exquisite colourful flowers, and would be suitable as a background for a soft green lawn dotted with crocuses, just drifts of them. The *Narcissus* should be allowed to naturalize in the lawn, and, with the golden trumpets of daffodils, jonquils, red, blue and white hyacinths and gorgeous tulips, will form the climax of the spring display.

A Dutch bulb grower gives as general directions some of the following:

Plant bulbs in rich finely worked garden mould; if possible manure the soil well with old rotted cow dung. For us here in Central China the planting season is from the end of October and all through November.

For tulip cultivation in the open, plant according to their size, from 2½ to 3 inches deep and from 3 to 4 inches apart. Low lying gardens must be drained to prevent the soil from souring and the bulbs from rotting. Tulips must not be planted two years in succession in the same spot without at least one foot of soil being dug out and new substituted.

For greenhouse tulips, place broken brick at the bottom of the pot for drainage and fill up with a mixture of good garden soil and sand. Plant three to five bulbs in each pot and cover one inch. Over the soil put another inch or even more of

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wood ashes, and put the pot in a shady place. It is very important to keep most bulbs in a cool, shady place. Water occasionally. If severe weather sets in, give protection. To force them, bring them into the conservatory, but only after the roots have grown firm.

For hyacinths grown in glasses, select only bulbs of the best quality. Place a piece of charcoal at the bottom of the vase and fill to within 1/20 of an inch from the bottom of the bulb with pure soft water, allowing the water to touch the bulb will cause it to rot. Store the bulb in a cool, dark place from eight to ten weeks, by which time the roots will have grown to the bottom of the vase, and a green shoot will have appeared at the top of the bulb. The water should be replenished occasionally, but avoid wetting the bulb or disturbing the roots. After this period in the dark, bring the plants out into a light but always cool place to encourage greater development. When they actually bloom, the plants can stand a higher temperature. Give the plants ample time to develop before bringing them into light and warmth. Hurrying them on will only produce stunted blossoms.

For out of doors, treat hyacinths in the same manner as tulips. Space the bulbs from four to six inches apart according to size. Cover with leaves to retard growth.

For indoor flowering in pots, put only one bulb in a five inch pot. Arrange larger numbers in bigger pots in proportion, spacing fully three inches apart.

For daffodils and narcissus in the garden, prepare the soil as for tulips and plant the bulbs four to six inches apart, according to the species of bulb, the bunch flowering variety being smaller than the trumpet daffodil. These bulbs are hardier than the others and need less protection. Do not remove the bulb after flowering, for every season they will produce flowers of greater beauty.

For indoor flowering in pots treat them the same way as for the tulips, but space them only 1½ to 3 inches apart.

For crocuses, prepare the soil as usual. These small bulbs are planted at a distance of one to two inches apart, often in groups of twenty or more. The effect of these groups in the lawn is delightful.

For indoor flowering use garden soil or coarse sand and plant one inch apart and half an inch deep. Treat them like hyacinths and tulips and keep them cool and dark for the same period, after which bring them to the light. Warmth causes the blooms to fade more quickly.

For further instructions see the December, 1929, number of *The China Journal*.

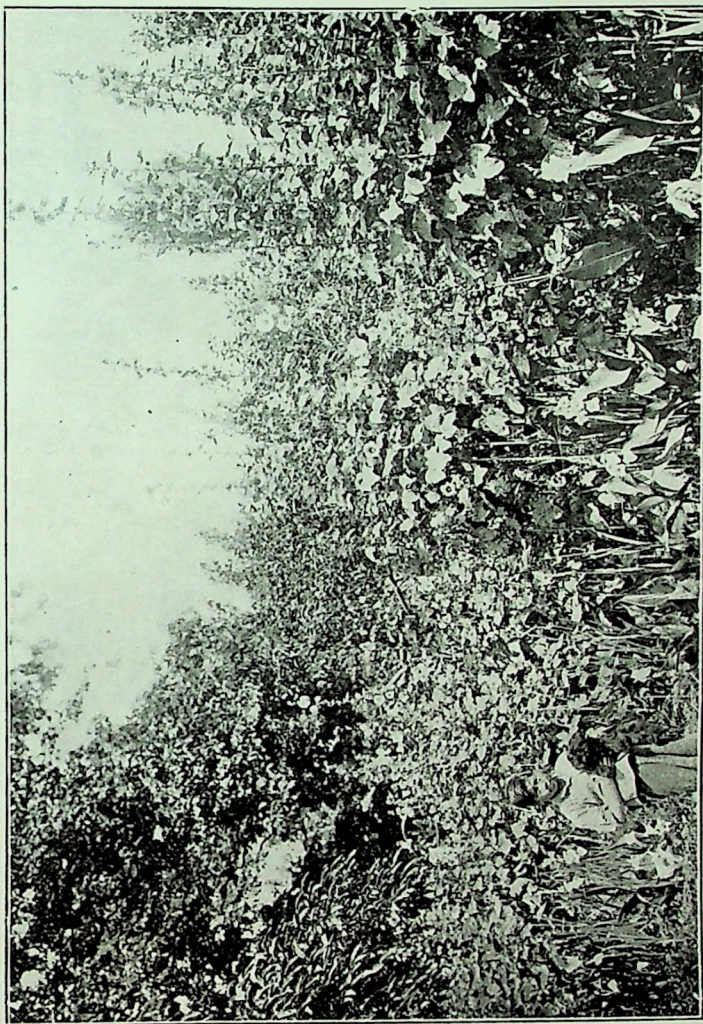
L. L.

SOCIETIES AND INSTITUTIONS

THE CHINA SOCIETY OF SCIENCE AND ARTS

THE FORTHCOMING SEASON: It is hoped during the forthcoming winter to have the usual series of lectures delivered before this Society. The subjects, names of lecturers, dates and places will be announced later, as well as being circulated to members in the usual way.

The first lecture of the season will be one by the President of the Society, Mr. Arthur de C. Sowerby, the subject being "A Tour Through Netherlands India." This will be illustrated with lantern slides. It is hoped later to have a lecture from Dr. Herbert Chatley, the Vice-President for Science of the Society, and, if he should visit Shanghai, from Dr. John C. Ferguson, the Vice-President for Art.



A fine Bed of Hollyhocks with Gladiolus in the Foreground in a Shanghai Garden.



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SOCIETIES AND INSTITUTIONS

ROYAL ASIATIC SOCIETY

HISTORY OF THE DAYS OF THE WEEK: Dr. Chatley in addressing the members of this Society on this subject on October 23, remarked that, just as the geologist glimpses the ancient history of life by fossil specimens in existing rocks, so the historian glimpses the ancient history of man by fossil fragments in existing speech and customs. The names of the days are such fossils. The week as such is derived in the first instance from the Jews, but its observance was rendered universal by Christianity. In a remoter degree the week may derive from the Babylonian moon worship, but this is rather uncertain. The current names of the days of the week do *not*, however, come from the Jews. They are first heard of about the time of Christ, and were almost certainly popularized by Chaldean astrologers in Rome, being adopted as a convenient and propitious method of counting time somewhat before Christianity became general. Constantine, by identifying the day of the Sun with that of the Resurrection, finally fixed the system. The names are derived from the system of planetary hours, according to which the 24 hours of the day (themselves a Babylonian invention) were allotted to the seven planets then known in their order of increasing rapidity as seen from the Earth. This natural order is as follows: Saturn, Jupiter, Mars, the Sun, Venus, Mercury and the Moon. If this series of seven is repeated four times, the twenty-fifth item is three places up in the original series, and it will be found that this process continued gives exactly the order of the days of the week just as we have them, namely, Saturn, Sun, Moon, Mars, Mercury, Jupiter, Venus. In Roman times these planetary names were those actually applied to the days ("*Saturni sacra dies*" occurs in Tibullus' poems), and they have spread over Europe with only slight changes. In the Teutonic countries the names were translated into those of the Teutonic gods, which the Romans considered corresponded prior to the adoption of Christianity. They still exist in the complete Latin form in Wales and Brittany. Owing to ecclesiastical influences in some countries Sunday became Dominicus (Dimanche, Domingo) and Saturday Sabbatum (Samedi, Samstag, Sabato), but the original forms can often be traced in old records.

The speaker then discussed the possibility of this planetary system of week days existing amongst the Babylonians back to, say, 1,500 B. C., and indicated that Saturn (=Kronos or J1) *may* have been associated with the Sabbath in, say, 1,500 B. C., and that the Harranian star cult *may* have originated the whole system then, but that so far the case was not fully proven for an antiquity extending beyond, say, 300 B. C. Weeks as such were not employed in Babylonian, Egyptian, Greek or Roman chronology.

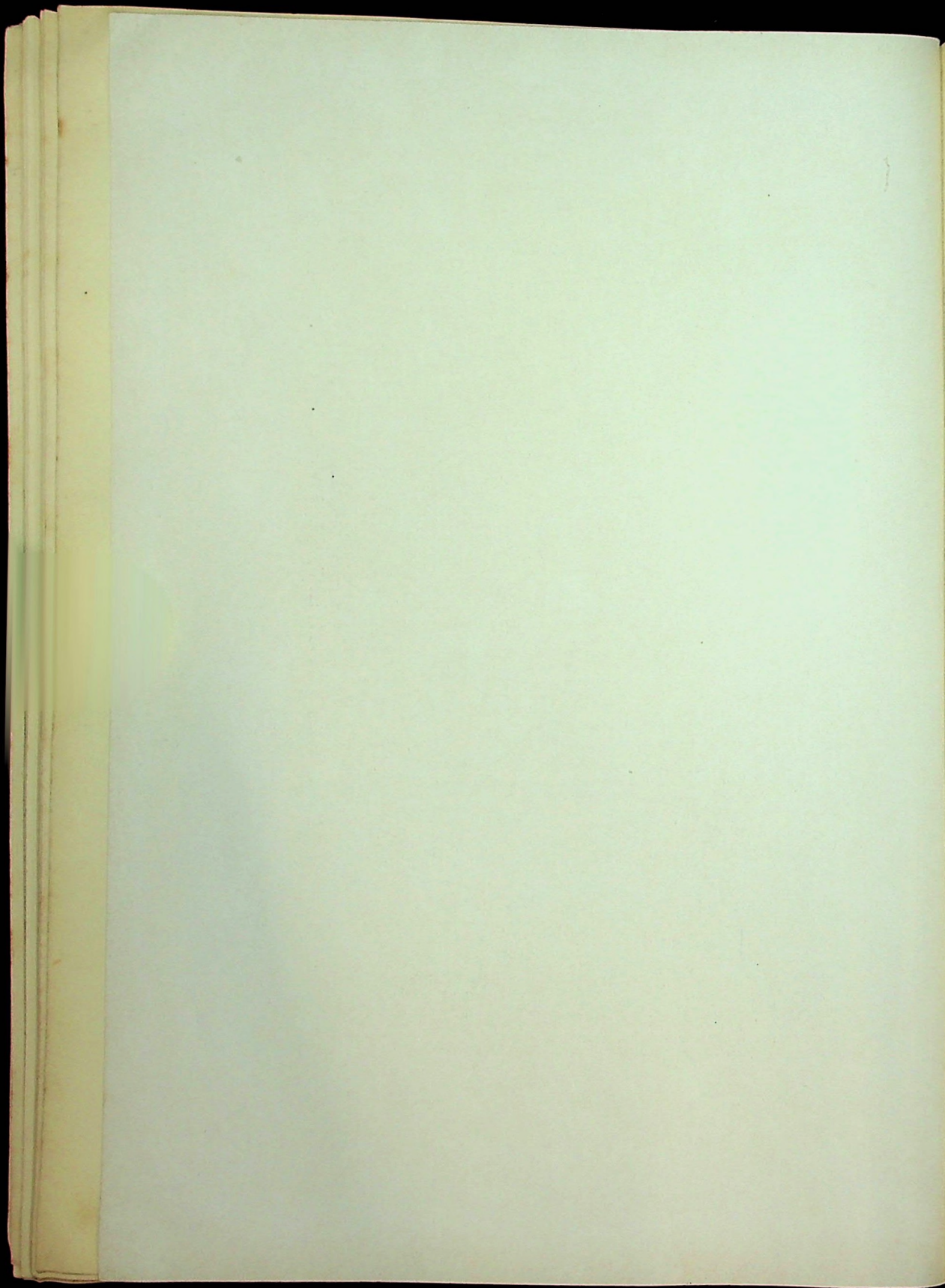
The planetary week day series is known in China in connection with Manichaeism, Nestorianism and Indian astrology since the Tang Dynasty, and occurs in a septenary division of the 28 stations of the Moon in Chinese astrology, but in chronology the system never established any definite foothold. In Arabia and India the series is used in astrology, but not in popular practice.

The future of the week is uncertain. It is an arbitrary division of time dependent for existence on the advantages of a seventh day holiday and Jewish tradition. An alternative five day week has been discussed.

MUSEUM CLOSED DOWN: It is with considerable regret that we note that the Museum of the Royal Asiatic Society has had to be closed to the public indefinitely, owing to the unsafe condition of certain parts of the building.

ENGINEERING SOCIETY OF CHINA

ANNUAL MEETING: The annual general meeting of this Society was held on October 15, when Mr. H. Berents, Norwegian, was re-elected as President. A long paper was read before the Society by Mr. Berents, which has been given publicity in the daily press in Shanghai, and will appear in the Journal of the Society.



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EDUCATIONAL NOTES AND INTELLIGENCE

EDUCATION IN MANCHURIA : According to a writer in the *North-China Daily News* of October 3, in an article with this title, the present Governor-General, Marshal Chang Hsueh-liang, has done much since he assumed leadership in Manchuria to improve and advance education in the three provinces under his control. His first step was to expand the Northeastern University, making large personal donations, and erecting a series of fine buildings for the institution, which has increased its roll from 200 to 2,000 students. Great impetus has also been given to education of women in Manchuria which was backward, while the Marshal maintains some thirty students abroad at his own expense. Elementary and secondary schools all over the country are subsidized, while physical culture and an interest in sports and athletics is encouraged. Marshall Chang's efforts have met with an eager and ready response from all classes of people in Manchuria, so that in this direction, as well as in others, a great future lies before the country.

OPENING OF MEMORIAL COLLEGE TO TSAI KUNG-SHI : The Kung Shi College was opened at 476 Avenue Haig on September 3 in memory of Mr. Tsai Kung-shi, late Commissioner of Foreign Affairs for Shantung, who met his death during the so-called Tsinan incident in 1928. The funds to erect and endow this institution were raised by the widow of Tsai Kung-shi, who made an extensive tour of the South Sea Islands (? East Indies) collecting from Chinese sympathizers. Many Government officials aided her in this undertaking. The College has opened with a good enrollment of over 200 students, and it is to be hoped that it will be a great success, so that out of the sad death of its namesake good may come.

PUBLICATIONS RECEIVED

BOOKS :

Christians in China Before the Year 1550, by A. C. Moule ; S. P. C. K. House, London.

PERIODICALS :

The Hongkong Naturalist—The Annals and Magazine of Natural History—Ostasiatische Zeitschrift—Shipping and Engineering—The Journal of the Society of Chemical Industry, Japan—The Chinese Nation—The American Express Oriental Travelogue—The Chinese Economic Bulletin—University of Illinois Bulletin—The Modern Review—The China Critic—Discovery—Bulletin of The American Museum of Natural History—Peking Natural History Bulletin—The Naturalist—Manchuria Monitor—Man—Game and Gun—The Chinese Recorder—The Entomologist—Department of the Interior Bureau of Education Collections—The Vedanta Kesari—The Salmon and Trout Magazine—Mitteilungen aus den Konigl Naturwissenschaftlichen Instituten in Sofia—La Revue Nationale Chinoise—The China Medical Journal—The Travel Bulletin—Chinese Economic Journal—Bulletin of The Department of Biology of Yenching University—Abhandlungen der Naturhistorischen Gesellschaft zu Nurnberg—The Philippine Journal of Science—The Metropolitan Vickers Gazette—Extrême Asie—Contributions from the Biological Laboratory of The Science Society of China—Smithsonian Institution Collection—Bulletin du Museum National d'Histoire Naturelle—The New Zealand Journal of Science and Technology—The Mid-Pacific Magazine—Sinica—Bulletin of the Fan Memorial Institute of Biology—Bulletin of the Geological Institution of The University of Upsala—The Chinese Social and Political Science Review—Ghadar Dhandora—Bulletin of the Geological Society of China—International Communications Review.

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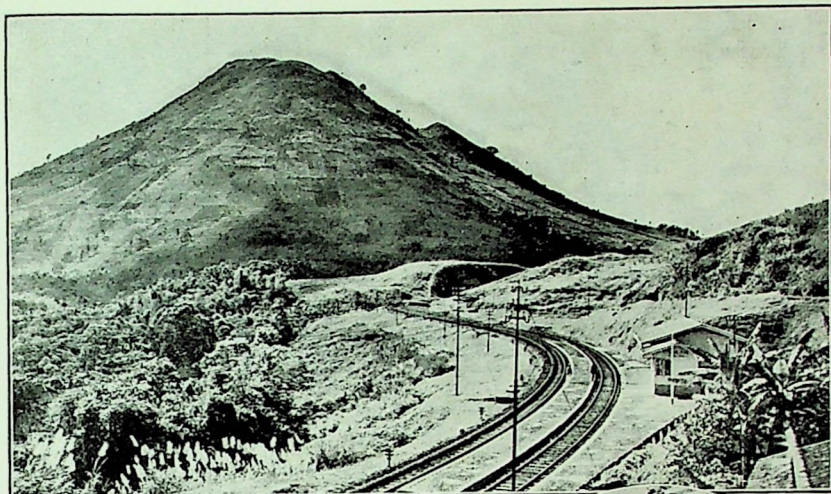
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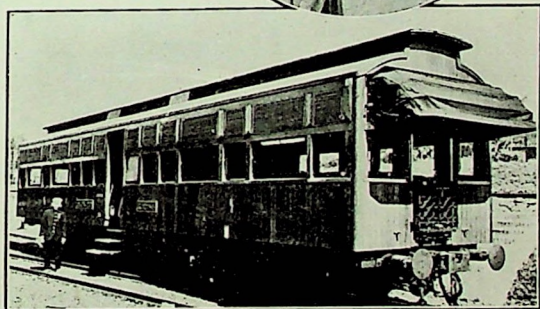
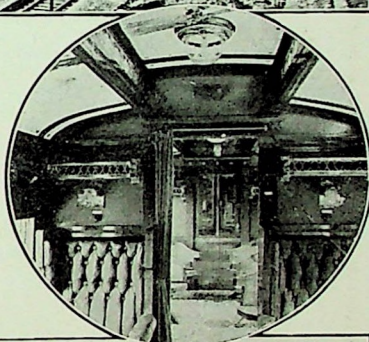
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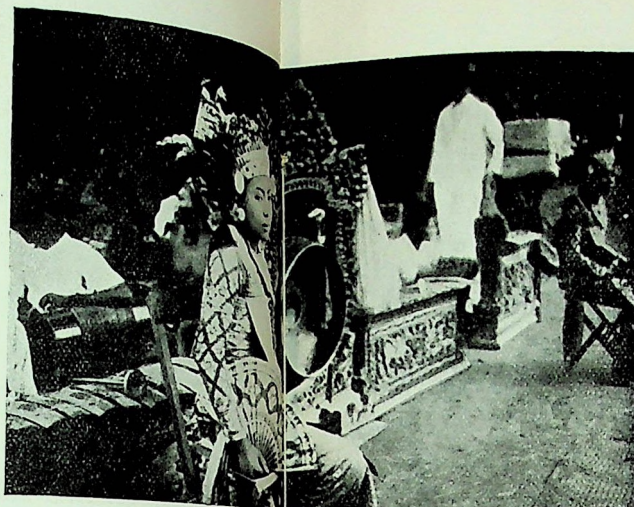
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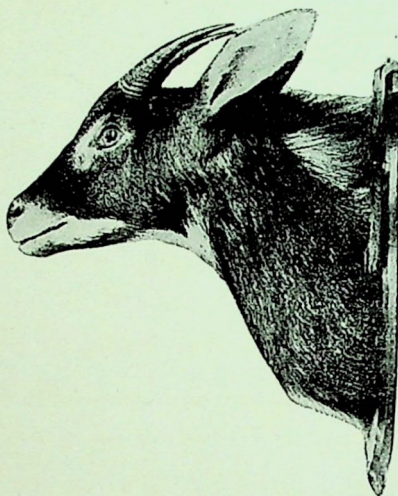
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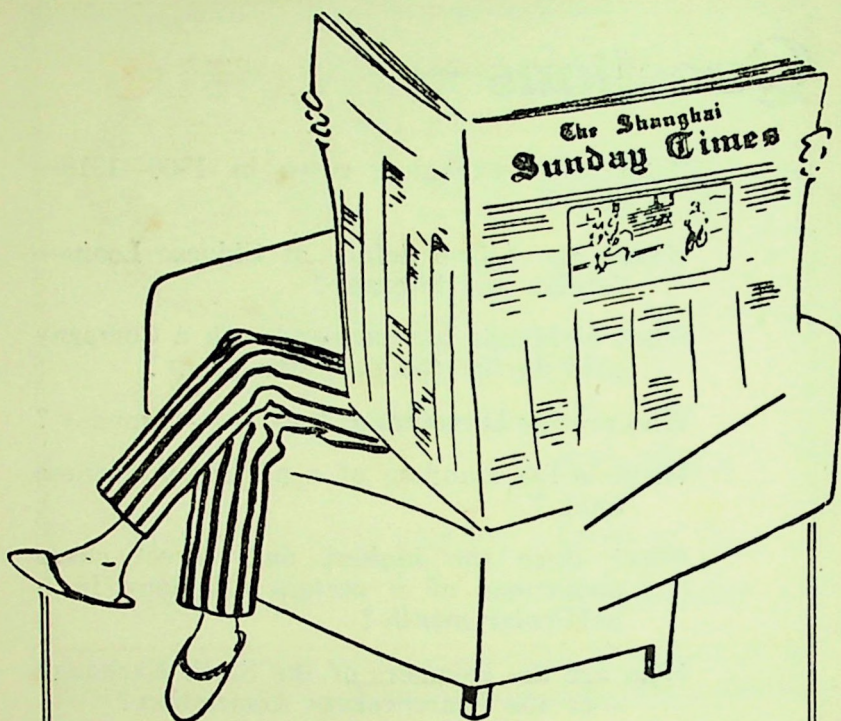
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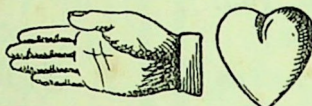
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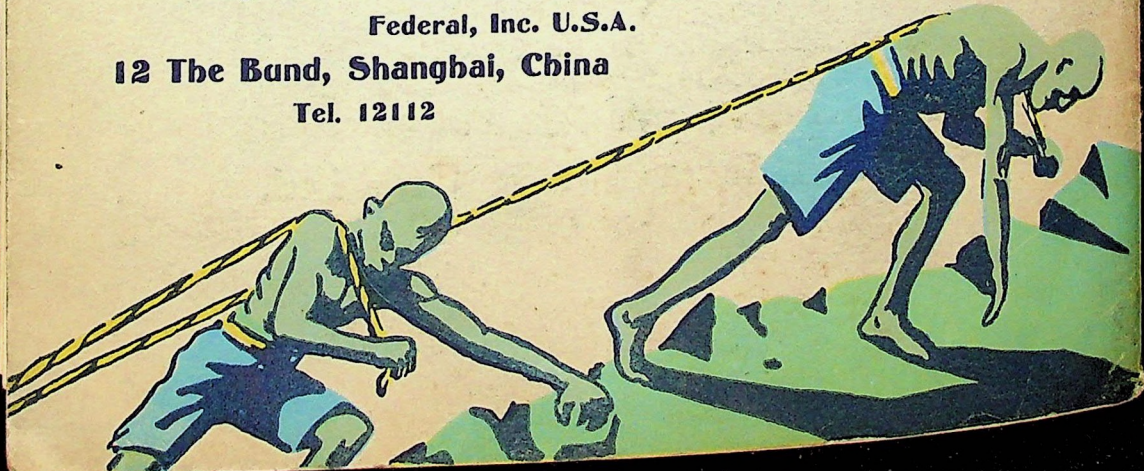


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