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THE FISH-SKIN TARTARS.

By M. F. A. FRASER.

Considerable attention has been attracted to Siberia of late years by several causes. The adventurous voyages of Captain Wiggins up the Yenissei River to within a few hundred *li* of China, and his support both by the Russian Government and by the British Foreign Office; the building of the great railway, so interesting to foreign residents in China, both from the political possibilities with which it is fraught, and the personal consideration of a three weeks' journey to England, with the Channel the only salt water to cross; the attention of late given to gold mining both by Chinese and Russians; and the Korean question, so intimately connected with the Siberian. It is a land, says Savorin, where everything that man can need is found in abundance,—a Canada in reserve which is destined to relieve the over-crowding of Europe for centuries. It has rich arable land, fat meadows, iron, silver, gold, copper, lead, and precious stones. In the rivers are the otter, the beaver, and fish in such abundance that they can be in places scooped out in buckets full. In its woods are sables, squirrels, martens, foxes, ermines. Had not its exploitation been left to the enterprise of private *conquistadores* like Ermak Timoféyevitch and Khabároff who sought rather their own benefit than the permanent advantage of the State, there is little doubt, as Ravenstein observes, that the Amur colony might have been made a wealthy, populous, and prosperous

colony two centuries ago. At present the population of about 40,000 Russians and 24,000 natives have on an average each 6 square miles of elbow-room. It is now quite a long time ago since I was called upon to translate from Russian the two interesting monographs of V. P. MARGARITOFF—published in 1887 and 1888 by the Vladivostock Society for Promoting the Knowledge of the Amur Region—on the Orotchis, a tribe who may be called a sort of *poor relations* of the Manchus who rule this huge empire, the other on kitchen midden remains, found in the Amur Gulf near the Sedimi River. MARGARITOFF is a specialist in skulls; but although he devotes much of his two pamphlets to anthropological subjects, yet there is much in them which it is hoped will be thought of general interest.

Mr. M. VENIOKOFF, of the Russian Geographical Society, in the Russian work[1] describing his travels, which he was good enough to present to this Library, says that he found his knowledge of the language of the Goldi enabled him to understand the Orotchis, as the two peoples have a great many words in common. The pronunciation, he says, differs considerably: the Orotchis say "*lamu*" for *namu* (sea), "*bila*" for *bira* (river), and generally soften their words. He extracted a vocabulary from the Travels of LA PEROUSE, but unfortunately lost it before he could verify it on the spot. Mr. VENIOKOFF's guide, who was acquainted with almost every Tungusic dialect,—more especially Transbaikal Tungus, Solon, Goldi, and Mangun, told him that Orotchi was more like to Solon than to any of the others. He says the Chinese call the Orotchis *Erh Yao-tsz*. The Chinese immigration, he says, does not extend beyond 46° N. lat.

The country VENIOKOFF describes as a land rich in wonderful natural harbours, rivalling even South Australia in this respect,

[1] *Puteshestvya po Okrainam Russkoi Azii i Zapiski o nikh*, p. 88. St. Petersburg 1868.

called by the Russians *Bercgevoi Khrebet*, the coast range. The Sikhota Alin parades the narrow strip of land lying along the Pacific, here called Gulf of Tartary and Sea of Japan, from the basin of the Ussuri and the Amur Rivers. To the west of the Sikhota Alin range flow these two great rivers, soon united into one, the Amur, in a nearly due north direction, with only a trifling inclination to the east. From the Sikhota Alin flow eastwards into the Pacific those minor rivers by which the Orotchis and Goldis trap the sable and spear or net the salmon and the sturgeon. This great mountain range thus plays in Siberia much the same *rôle* that the mighty chain of the Andes does in South America. It is, however, not of such a regular wall-like shape, being more *Alpine* in character. Its crest varies in distance from 25 to 80 miles from the coast.

The Orotchis, a Tungusic tribe, formerly occupied the part of Russian Tartary extending from the shores of Peter-the-Great Bay (Zalif Petr-Veliki), lat. 42° N., long. 132° E., to De Castries[2] Bay, lat. 51°·28 N., long. 140°·49 E., and from the upper affluents of the Rivers Ussuri and Amur to the Pacific. Here surrounded on three sides by peoples of other type, they have undergone in the course of time an ethnological modification, their contact with the *Manchus*, a people of far greater culture, having worked the most powerfully in that direction. In the neighbourhood of Vladivostock (42° N.) there are now no pure Orotchis, and indeed up to about 48° North latitude; the Orotchi type, expressing the outer life, and the language expressing the inner having been gradually so changed by Manchu and Chinese influence, that even the Tungusic origin of the race is hard to identify.

The transforming influences from the West and North have been less marked, but have been nevertheless so effectual that the primitive appearance of the Orotchis now remains intact

[2] Named by LA PEROUSE, in 1787, after the Minister of Marine of France.

only north of 48°, and moreover only along the coast. For this reason Mr. V. P. MARGARITOFF, from the Russian of whose work the following is a translation, considerably adridged, was instructed by the Society [Amur Province Scientific Exploration and Investigation Society] to proceed as far North as 49°, to Port Imperial[3] (Imperatorskaya Haveñ], to study the pure Orotchi, instead of to any point nearer Vladivostock, the head-quarters of the Society. This entailed a sea voyage of about 800 miles. Messrs. SHEVELEFF and SHULIÑGIN gave the explorer a free passage there and back in their steamer "A. K. Wolden," and the Society voted 400 *rubles* for his equipment—which included objects suitable for barter with the Orotchis for objects for the Museum—and for hire of guides, drivers, etc., in the course of his explorations, which extended along the course of the rivers Koppi, Tundji, Khodē, and Vē.

The most *costly* objects acquired were men's and women's costumes, and *shaman* paraphernalia, but the *dearest* to the explorer's heart were 17 Orotchi skulls and one skeleton, which were obtained *gratis*, but with much risk and trouble, as the Orotchis (he naïvely explains) "*like all semi-savages*, are ever ready to take up arms in defence of the tombs of their ancestors." These skulls of Orotchis, for the first time acquired by the Vladivostock Museum on this occasion, he considers most important aids to our knowledge of anthropology, the more so as some of them were obtained from very ancient burial-places. Of the manner in which he obtained one, he speaks [on p. 30] in a manner which it is very painful for one not an anthropologist to read.

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[3] This place is marked on old . . . maps as Barracouta Bay. The "Barracouta" was a British war steamer which took part in the inglorious Siberian campaign of the English and French during the Crimean War. It was in Port Imperial that the greater part of the allied forces were lying when on 1st July official confirmation of the conclusion of peace arrived in the far north-east. The first Russian Settlement, named Konstantinoffsk, was established here only in 1858. It was abandoned during the war, but re-occupied afterwards. It is closed by ice from November to middle of May.

外交部藏書

SCHRENK, when he visited the Amur River in 1854, found that the modern Orotchis extend from De Castries Bay, N. 51°·28, E. 140°·49, to St. Olga's Bay, N. 43¼°, E. 135°, having the sea for their eastern boundary, and for their western the upper waters of the Ussuri and Amur, consequently they inhabited the western as well as the eastern slopes of the Sikhota Alin range. South of these, *i.e.* on St. Olga's Bay, and further south, lived Orotchis who had become considerably changed by Manchu influence, and were known by the Manchu name of Tadzi. They lived by the Ussuri and extended even to Vladivostock. These Tadzi have shifted their boundaries since to further North, and now live on the R. Nelma, falling into the Sea of Japan and called by them the Shamarga. Though these Shamarga Tadzi (or Tazi) withdrew from a condition of subjection to the Mandzi to further North, they have nevertheless lost the pure Orotchi type, and their language has been so changed that they are not easily understood by the Port Imperial Orotchis. Mr. MARGARITOFF saw two Shamarga Tadzi who were at Port Imperial *en route* northwards to Nikolaevsk to buy goods. These could talk with the Orotchis, but not perfectly intelligibly on either side. They shave their foreheads and wear two queues; their costume and their boats resemble those of the Mandzi. In a word, they are no longer Orotchis, but an offshoot of the Orotchis; the real Orotchis extend southwards only to the River Botil, where there is a village of 8 *yurts* of them.

On the other side the western Orotchis, living in the immediate neighbourhood of the Goldis, have mingled with the latter and adopted some of their peculiarities, and although they are acknowledged by the Orotchis of Port Imperial as Orotchis ("Amur Orotchis") they are not thought quite the same as themselves. "Amur Orotchi," said an Orotchi of Port Imperial, "a little Goldi, a little Orotchi, but not Orotchi and not Goldi; catch fish, very stupid, sell sables all same me,

pray all same Orotchi, and steal all same Goldi." These "Amur Orotchis" live on the Rivers Dongdong, Khungar, and generally on the western slopes of the Sikhota Alin. These rivers flow down from it into the Amur, which here flows nearly due north.

The Orotchis speak also of Amur Giliaks, still further North. "Giliak," however, in the mouth of an Orotchi speaking to Russians, means all natives anything like himself. MARGARITOFF was surprised when the first Orotchi he asked what he was, at Port Imperial, replied "a Giliak." [This custom has led to errors in Russian maps.] At last he succeeded in eliciting the information that generally speaking the Orotchis live at Port Imperial, the Orotchons on the Amur, beyond Khabaroffka, the Goldis on the Amur near Khabaroffka, the Giliaks away North at Nikolaevsk and the Tazi at Shamarga and past it.

According to SCHRENK, the northern neighbours of the Orotchis are called Olitchi. Among the Orotchis themselves dialectic differences are apparent between places only distant a few miles from each other, thus some call the sable *Nogo*, others *Noso*; some call the bear *Mapa*, others *Mafa*;—(it may be said in passing, that Mapa is *mafa*, grandfather or ancestor, the tiger, whose beat extends to 51° N. lat., being known also as "mafa,"—Sakhale Mafa, old black grandfather). They believe in a migration of souls, in which the tiger and bear play a part, and this belief is thought to be typified in some of their idols, half-beast, half-man. The Bear-Feast is not attended by the women among the Orotchis near Port Imperial, while further north among the Orotchis living along the Tundja River the women take part in this characteristic sport and ceremony. Their whole number, men, women and children, living at Port Imperial, and 70 miles round it, is only reckoned at 318. Even this is higher than the number given in the *Encyclopedia Britannica*, which states that in 1880 the whole

nation of the Orotchis only numbered 260. They are evidently the remains of a large tribe, for SCHRENK mentions villages even the names of which have now passed from the memory of the natives. Their chief occupation is trapping animals for fur, and catching fish, principally salmon. As the Tundja is the only river in this district up which fish ascend many miles to spawn, it is only along the Tundja that the habitations of this Tungusic tribe are found far from the Pacific Ocean. Although the Russian authorities are endeavouring to make them into a settled people, the nomadic habit ingrained in the race for centuries is hard to change. The necessity of storing and curing fish to make the *yukola* on which they mostly subsist, has always made them build some sort of permanent loft for that purpose, and a separate temporary dwelling for himself, the *yurt*. In these cold, smoky and filthy-smelling dwellings disease plays havoc among the natives, and they are no doubt the cause of this tribe having become so few in number now.

If the master of the hut is a *shaman*, there are seen near his *yurt* his idols, sticks carved into the shapes of bears, tigers, men, etc. An Orotchi village or settlement (*sélénié* in Russian) consists of 6 or 7 such miserable houses, built by a river, and each generally built *end on* to the prevailing wind. Each village has about 50 half wild dogs, whose barking, and howling as they fight over their food, thrown to them occasionally, is deafening. Nearly every one has a smith's anvil, bellows, etc., and makes his own rough implements such as knives, but arrows and spears are made by their regular arrow-smiths, who make also silver ear-rings, rings and bracelets. The Russian soldiers even entrust their rifles to these men when they require mending.

The food of the Orotchis is probably anything they can get, barring *snakes*, which they think unclean. Partridge, fish, deer, crow, seal, squirrel,—none of these come amiss to them. Bear is the favorite meat; they are fond of vegetables, which

they taste but rarely, but hitherto the orders of the Russian Government, which has directed them to plant kitchen gardens, build good cottages and keep poultry and pigs, have been almost a dead letter, as the people are so incurably lazy. Their iron kettles, and their tea-pots come from Manchuria; they drink a good deal of tea, and use chopsticks. Soup as a rule they despise, throwing it to the dogs, the only soup they esteem is a kind made of fish-heads, mixed with reindeer or seal fat. The *yukola* (cured fish) plays the same part there as bread in Russia. They have a custom, similar to what prevails among certain South American aborigines, of chewing the *yukola* and expectorating the juice into bowls; with some wild berries added: this is considered a savoury dish to set before a guest. Altogether the children are often given raw fish-heads to suck; the practice of eating fish which has not been either cooked or cured, so common in Japan, or raw meat of any kind, is almost unknown, except in cases of urgent necessity, as when out hunting, etc.

Skins of large fish, especially the whale and salmon (*Salmo gibbosus*, "gorbusha,") are used for clothing and foot-gear. Having neatly stripped off the skins of the fish, and dried and smoked them over the fire-place which is found in every hut, they fold them up any way, into as small a compass as possible and cram them into a groove two inches long and one inch broad in a thick beam of wood. They then set to work and hammer the dry skins with a very blunt iron axe, or a wooden axe made specially for the purpose. This softens the skin and makes it fit for wearing. The most ornamental skins are those of the Kuldja fish, which has dark spots; this makes pretty gala dresses for children. It is only women and children who wear complete suits of fish-skin; the men make little use of it except for foot-coverings, as for winter hunting it is too cold, and, not resisting water well, it is unfit for summer hunting and fishing, which bring the man often

into the water or under showers of rain. Chinese cotton cloth *(ta-pu)* is the principal material used for clothing, and in winter dog-skins and occasionally fox-skins are worn. Many dogs are reared for their skins. Dogs are also said to be reared for this purpose at Newchwang. Bed-covers, rugs, etc. are made of bear, musk-deer and reindeer skins. Sable and fish otter are only used for ornament, and then only by comparatively wealthy natives. An Orotchi with great stores of valuable furs will sometimes buy for large sums from the *Mandzi* wadded *khalats* and even sheep-skin robes. The Orotchi man's dress consists of the following: A *khalat* of *ta-pu* or other material, coming a little below the knee, with fastenings doing duty for buttons all the way down, the upper part crossed across the chest; favourite colours, white and dark blue, sometimes cinnamon coloured. A collar and facings of a different colour. A few wear a cotton shirt beneath, and sometimes a man will wear two *khalats*, or robes, the older of the two outside. Breeches, and spatter-dashes coming half way up the hip, as we often see among the Chinese. A belt, with side thongs for the spatter-dashes. The latter are sometimes made of fish-skin, seal-skin or fur, according to the air temperature to be guarded against. In winter a *shaba*, or skin robe shorter than the *khalat*, is worn. Shoes principally of fish-skin, occasionally, however, of musk-deer fur for winter, and dressed reindeer hide for summer. Shoes of reindeer or fish-skin, with soles of reindeer skin, are worn in summer, for fish-skin soles would soon wear out on the hard ground; but in winter, when the Orotchi goes generally on snow-shoes, he wears fish-skin soled boots. He is generally hatless, but dons a conical broad-brimmed birch-bark hat for rainy weather. In winter, a little cap of skin from reindeer's or musk-deer's legs, and a scarf of squirrels' tails, rolled round his neck and head outside his cap. In his *cummerbund* he carries two knives in birch-bark or leathern sheaths; one—long, narrow, and

pliable—serves as a gimlet, plane, etc., the other—shorter and broader—to cut his food, and for coarse work generally. He carries a birch-bark tobacco-pouch in his bosom, made fast to a coral running through his top button-hole. A few well-off natives have silks, but these are principally used for being looked at and admired, and not worn. They are given in exchange for wives by men marrying; and MARGARITOFF says he found in tombs silk and even brocade.

Women's costume differs little from men's: it is of course more ornate in style and of brighter colours, and it is adorned with brass *plaques*; favorite colours, yellow and red, light blue and cinnamon are also used, the rule being that the facings are of a different bright colour from the ground-tint; ear-rings of silver an inch across, with bright coloured stones attached. The rich wear three or four of these big ear-rings in each ear, and a few wear small nose-rings. This custom is very common on the opposite coast among the North American Indians. A few wear bracelets and rings.

Sable hunting forms the principal occupation of the Orotchis. It is not only their business, but their support and pastime, of which all the men are passionately fond. MARGARITOFF wished to take to Vladivostock as a servant a 15 years old boy, who had hunted sables one winter only. He offered him seven roubles a month wages and his clothes, and promised to send him home again. "There can do sable business?" he asked, and when MARGARITOFF said "No," the lad refused to go, saying "I will stop along you summer. No want money, only want do sable business." Another instance: Mr. BLOMSTER, a fish-dealer, has a workman, who is an orphan with no home of his own; he engaged this man on the condition, without which he could never have obtained his services, that he should have leave in autumn and the beginning of winter to go a-sable hunting.

The trappers' season begins about 1st October (13th October)

with the first snows. Then the Orotchi, having equipped himself for the chase, or before he begins to do so, goes out into the lonely *taiga* (*taiga* means the *world*) to pray *Anduri* for help in his undertaking. This every man, whether nominally orthodox Greek Church Christian or not, never fails to do. If he can get some flour, he (not his wife, but himself, in this instance) makes about 2 lbs. of it into a cake with berries and seal or reindeer fat. Some pounded *yukola* often has to do duty for the flour. Alone in the vast *taiga*, he kneels and prays: "Anduri, Anduri, I am a poor Orotchi, often sick, feet sore, hands sore, cannot go long way in *taiga*, send my traps good large sables, make me shoot reindeer, catch musk-deer, etc., etc. [as explained to MARGARITOFF in broken Russian]. He then scatters the cake north, south, east and west, and if he has any *vodka*, he pours out a libation of *vodka*. That whole day the Orotchi does no work of any sort, and next morning he is off into the *taiga* to set his nets and lay his arrows. He takes with him 4 lbs. of chopped *yukola* in a little fish-skin bag, 4 inches by 5, and a bit of brick tea (*kirpishnü tchai*) and a tea-pot or kettle (*tchainik*). He has on a short *shuba* of dog-skins and long warm gaiters of seal-skin; he wears an apron of fish-skin to keep his skirts from wearing out, and he carries a portable *yourt*, or tent, if he owns one. Much hunger and cold he endures, so equipped, in day-long wanderings over the trackless *taiga*. At night he sleeps in the little tent, in which he builds a fire; or else he buries himself in a hole in the snow for shelter from the wind; and so he wanders on after sables till his provisions are exhausted. Then he turns back, and does the return journey of several days *without provisions!* One Orotchi said they sometimes gorged themselves with food before setting out, and then made the whole expedition, sometimes lasting six or seven days, without taking any provisions with them at all.

In autumn, when the whole *taiga* is white with snow, but

the rapid rivers are not yet iced over, the Orotchis catch the sables with nooses (*plenka*). The *plenka* is a cord with a noose. Knowing the habit of the sable to cross small water-courses by trees if any have fallen across them, the Orotchi throws sometimes as many as 20 such bridges over his stream and lays on each what Siberians call a *plenka*.

Here it is necessary to explain that each Orotchi family inherits from its ancestors a stream on which that family has exclusive rights of fishing and trapping; and often they will journey long distances to fish in their own preserves. The sable running over the beam in order to cross the water, finds his road barred when half over across by a portcullis-like arrangement of little sticks leaving only a hole large enough for him to run through. When once he has entered the hole, he releases the fastening which keeps down a hair noose attached to a bent stick; the stick straightens itself in an instant, and the animal is killed by hanging.

This is considered the best trap both because it does not injure the fur, and because the sable dangling on high over the water is out of the reach of foxes and other animals for several days if necessary till the trapper arrives. With other traps, he sometimes finds the prey half eaten by foxes or ravens. When he has set his traps, the trapper goes away for a day and night, during which he generally prays to *Anduri* for good sport. The next day he returns, takes out any sables caught and resets his traps. With the exception of a few visits to his home for a twenty-four hours snooze, the Orotchi is occupied with his noose-traps the whole of autumn. When the rivers get frozen over hard, the *plenka* becomes useless, as the sables then cross on the ice and have no need of a bridge. The Orotchi now sets his spring-bows. In China also these are used. At a Russian brick tea factory between Yenping and Kienning, up the Min River from Foochow, I saw in 1877 the skin of a huge snake 16 feet long, which had been killed

in a spring-bow trap. A long string connected with the extemporized trigger which keeps the bow bent, is stretched across the animal's *run*, and made fast to a tree. The bow is raised on a rest elevated more or less from the ground in proportion as the animal, for whose heart the arrow is intended, is large or small,—for a reindeer, two feet; for an otter, less; and for a sable still less. Other sable traps are made in holes in trees about three feet or less from the ground. A bait is put in the hole to which is attached a slender stick which props up a heavy beam until the sable himself shakes out the support, brings down the beam, and is crushed to death.

Roving over the *taiga* on snow-shoes all winter, as he does, the Orotchi makes war on the sable with gun and bow as well as with trap. When his sharp dog puts up a sable, it endeavours to tree the game so that its master may kill it with a bullet or an arrow. When the game hides in a hole, still another trap, the bag-net comes into play. The hunter with stamping and yelling scares out the simple sable, right into the net, and then dog or man makes short work of him. There are no wolves or racoons near Port Imperial, but the fox, otter, musk-deer and squirrel are also hunted for their skins as a secondary occupation, by the Orotchi on the campaign against the more valuable sable. The fox is sometimes shot, but generally killed by poison or caught by dogs. The Orotchis get from the Goldis drugs for poison prepared by the Manchus. Of late they have been getting a little strychnine from Russian traders. The otter's habit of always leaving the water at one favourite landing-place makes it easy to shoot him with the spring-bow. The squirrel is not held to be worth a charge of powder and shot, or of special traps, and is caught *anyhow and anywhere*. Deer are not much hunted, but a pair of soft antlers are sometimes dried and sold to the Goldis, the southern neighbours of our Orotchis. Near Port

Imperial musk-deer are in great abundance, and their musk is sold not only to Goldi and Manchu, but also to Russian traders. There is a special trap for these animals. The musk-deer, treading on a platform round which is laid a running noose, tilts up one end of one of the loose boards, and by so doing releases the catch which holds down the bent small tree to which the noose is attached. The tree straightens itself instantly, carrying the deer aloft suspended by the legs in the cruel *lazo*. The elk, spotted deer, bear, wild pig, two kinds of seal, and sea-lion (*sivoutch*) are hunted for food as well as for their fur, as are also occasionally lynxes. The elks' young horns and downy wool are sold for mattrasses. The sea-lion's hide makes tough and enduring leather for straps. The boar is considered the most noble game, and the bear the most dangerous. The elk and reindeer are generally killed with spring-bows; the seal and sea-lion with gun and with arrow. In spring, when, as the Orotchis declare, these beasts do not dive when wounded, they go after them in large boats with guns. As the seals at all other seasons *dive*, they then steal among them at night and harpoon them from small boats. They never throw the harpoon until they have shouted and awakened the game from its sleep. If the harpooned seal makes for the sea, the hunter has to cut the rope, otherwise he follows in tow. Where there are no natural basking and sleeping places, like flat rocks or trees just *awash*, the Orotchi builds some in the water to attract the seals. The bear and boar are killed with the bullet or thrown spear. Young bears are sometimes caught alive, reared till three years old in cages, and then become the central figures in a *bear feast* and are killed and eaten. Fur-trapping is getting worse and worse every year owing to the drying-up of the small water-courses; so at least, aver the Orotchis. Even the seals whose watery environment, the sea, is more stable, are becoming rarer; the white seal has now almost disappeared from the

neighbourhood of Port Imperial, leaving only the spotted variety. With land animals, more exposed to the severity of the climate as they are, the case is still worse. Frequent forest fires, winters with excessively deep snow, silting up of rivers, are steadily diminishing their number. All these misfortunes have come upon them, so they believe, with the coming of Europeans and especially of Russians. They even go so far as to lay the appearance of *new* phenomena like thunder at the door of the Russians. Every native when asked how many sables he trades away in a year, will religiously inform the questioner that before they knew Russians and other foreigners who come in steamers, sables and all kinds of game abounded in the *taiga*, but are now getting fewer and fewer. There can be little doubt that the immense prairie fires are the principal cause of this diminution, as they burn not only their lairs but the animals themselves. As in California these fires are generally caused by the carelessness of Europeans, to whose minds the welfare of the *taiga's* vegetable and animal life does not present itself as an object of such vital importance as it does to the native hunter's. A keen and sturdy hunter can still get in a year, say 70 sables, 30 foxes, and 75 head of other game; a hunter of middling capacity say 40 sables, 15 foxes and 50 other game; a lazy or weak man only 10 sables and say 20 head in all of other animals. The Orotchi boats are of various kinds. The biggest, a sea-boat, of five stout long planks, forming the bottom and sides, with prow rising about 18 inches higher than the sides; a rough attempt at a swan figurehead adorns the bow. When only one man is rowing, as for instance when they are casting out nets, the bulwarks are lowered by removing the upper side planks, leaving a smaller boat of the same shape, but lower and narrower and with a more salient prow. Wooden nails are used, and seams are stuffed with thin laths caulked with boiled moss. These boats are about 10 *arshins*, or

23 feet long, by 5 feet broad. They sit very lightly, drawing less than 4 inches, and carry up to 5 men and 50 *pouds*, or 1,800 lbs. of cargo into the bargain. The *omorotchka*, or "dug-out" canoe of pine, poplar or willow is so crank that a tyro capsizes in a few strokes. A double-bladed paddle is used, except when creeping after seals, when the short paddles are held, one in each hand. The canoe is about 14 feet long, and just broad enough to sit in; it carries 360 lbs. of cargo besides the paddler. There are in addition river boats (*ulmak*), with rounded bottoms, looking like long troughs afloat. A false bow protects from reefs and snags, and prevents the boat dipping nose under when propelled against the current. In such boats the Orotchi does all his summer flittings, and his sea and river fishing either in what the Russians call an *artel*, or company of workmen, in the big boats, or alone in the light canoes.

The "whale" and the gorbusha (*Salmo gibbosus*) are most sought after by the fisherman, whether armed with net or spear. These are both fleshy fish, good for making *yukola* out of, and are easily caught *en masse* owing to their habit of swarming up the rivers to spawn at regular seasons, moreover they spawn just at the time of year when the Orotchi is not taken up with his favourite trapping and hunting pursuits and has consequently more time to devote to the preparation of *yukola*. The *ketá*, first described by PALLAS under the name of *Salmo lagocephalus*, is really a salmon; he passes most of his time in the deep sea, and comes as far up rivers as he conveniently can to spawn at fixed seasons. *How* he lives there we are never very likely to know, but this much we can hazard, that he rarely goes far from the mouth of the river in which he was born, and therefore does not journey to the Arctic Ocean and back as some suppose, but that both old fish and new-hatched little ones, when they descend the rivers again, only swim as far as the sea, and pick up their nourish-

ment there near the mouths of the rivers till spawning time comes round again. Indeed, BREHM says that science has now abandoned all the old ideas about immense sea-voyages made by salmon, herrings, etc. The salmon make their appearance about the mouths of the rivers in June, and from then till the middle of September they ascend the rivers in three swarms, separated from each other by a short interval of time. In the district surrounding Port Imperial the first swarm begins about 15th June and goes on till the beginning of July. About ten days later, say 20th July, begins swarm No. 2, and goes on till about 1st August. Then after another couple of weeks interval begins the third swarm. By middle of September the salmon have quite ceased to pass up the rivers and are beginning to come down again. The last is the biggest swarm of the three, and the first is the smallest, but the first contains the best fish. The first is not a swarm in the strict sense of the word, as the fish do not go beyond the influence of the sea-tides. The *keta* at this time looks fresh and lively; his scales gleam like silver, his gills are rosy, his jaws straight and firm, his teeth hardly visible, his flesh of ruddy tint, and able to stand a long sunny day without going bad. The *keta* of the first swarm salt down excellently both with regard to flavour and with regard to keeping qualities.

About 20th July begins the second swarm. The first ascend in great numbers and seem eager to get into fresh water, being caught now miles from the sea. They are no longer fresh and vigorous; their silvery scales are wanner, their gills more dusky; dark irregular spots appear near their fins; their upper jaw projects forward and bends down, their teeth are full grown and some of them bent backwards. The flesh has lost its rosy colour, and goes bad in the sun in 12 hours; and the second swarm salt down, but by no means so well as the first.

About 20th August all the Orotchis who have been prevented by laziness or other causes from laying in a stock of

excellent first and second swarm, first for *yukola*, make vigorous onslaught on the third swarm and third-class fish which have gone much higher up the rivers than their predecessors. This third swarm are, indeed, ready to brave every obstacle in their rage to swim higher up the rivers. They are now so changed that it is difficult to believe that they are the same sort of fish as the first swarm. They have grown a dirty piebald colour with dark gills, distorted jaws, and large hooked teeth. They look unhappy and seem to have no ambition for anything but to get farther from the sea. The flesh of this last swarm exposed to the sun goes bad in a few hours.

These changes in appearance are common to all the salmon tribe at spawning time, and are due to many causes, food and water, light and warmth, but principally to the spawning itself. MARGARITOFF saw *keta* which had been caught at the time of the second swarm fully two miles from fresh water, and had already deteriorated in the manner above described even in the sea. The fish of the first swarm are still fresh and vigorous, perhaps because younger and spawning for the first time. The fish of the first and second swarms undoubtedly return to the sea, but many of the third swarm die. The Orotchis say in June the old fish come up, in July younger ones, and in August the youngest of all, which are spawning for the first time. MARGARITOFF is inclined to believe that this is true, and that the fish of the third swarm, the August swarm, of one year, become the fish of the second, the July swarm, in the next year; the fish of the second become the fish of the first in the next year, etc. He cannot believe that an animal so high in the scale of creation dies immediately after it has performed the function of reproduction, as some believe. He would like, however, before expressing a decided opinion, to have this question answered: does the jawbone change, or only the gums and teeth? If the latter be the

case it may well be that the same fish return within a year, or within two years still more possibly.

The *gorbusha (Salmo gibbosus)* is very like the *keta (Salmo logocephalus)* but smaller, and therefore more quickly made into *yukola*, and more in request among the fishermen. It spawns in the same way, in three swarms, but each a little earlier than the *keta*. Thus between the two they are swarming up the rivers all summer. The *gorbusha* has smaller scales, and when salted down has a coarser taste. The Orotchis say that when the first swarm of *gorbusha* is abundant, *keta* will be not so numerous as usual, and when small, *keta* will be abundant.

The *gorbusha's* changes are still more marked than those of the *keta*. A hump appears on the *gorbusha* of the third swarm, an inch high, beginning at the back of the head and sloping down gradually to the tail, which makes the fish look half as big again as it generally is. Worms sometimes appear in the hump of the flabby *gorbusha*, of the third swarm, even during the life-time of the fish.

Another species of *salmo*, the *tchuma*, is in size half way between the two preceding species, from which indeed it is scarcely distinguishable. It does not undergo changes during the spawning season, or, more accurately, no one has yet observed such changes in this fish. It swarms twice. It salts down best of all the salmon, but is in too small quantity to be an article of export.

The skin of the *khoyo*, a fish like a large pike, makes good material for clothes and boots, and its flesh is excellent eating. Its mouth is so big that it swallows down entire without difficulty a bait composed of a *gorbusha* nearly five inches broad by eleven inches long. It spawns in fresh water, but does not go into the rivers for that purpose in shoals. It is sometimes harpooned from canoes. Herrings and cod are numerous but not much sought after; the latter grow to about

18 lbs. weight; children too young to go sable hunting catch them with hook and line.

Nets are made of the fibres of a sort of nettle growing in low places near the sea. The stalks are picked in autumn when quite mature, and in winter the women pound them in grooves like those in which fish-skins are pounded and made soft and supple. The fibres are then spun with a distaff like flax, and twisted together into the thicknesses required for ropes, cords or nets. The men complete the manufacture of the net themselves, and as soon as made boil it for two or three days in reindeer's blood to make it, as they suppose, last the longer in salt water. This boiling gives the nets a ruddy colour. The drag net is a good deal used. Some natives of Japan squatted on this coast during 1883 and carried off large quantities of fish.

The Orotchi often sells his furs, musk, etc. for money, and he knows pretty accurately the proper price in money to ask, and will not lower it. But on the other hand, he often has to barter, or truck his goods for others, for tobacco, tea, powder, lead, flour, metal pots, pans, etc., guns, cloth, and so on, and sometimes he may wish to barter for ear-rings, buttons, necklaces, etc. In this case he is invariably cheated by the trader. Say he values a sable at 6 or 8 roubles. If he does not want goods, but wants money, he will not sell under 6 or 8 roubles, as the case may be, but once let him be in need of goods, and he is swindled into taking two roubles worth of *tapa* ("*daba*") or even half a rouble's worth of gunpowder, as the equivalent of a sable-skin, which is worth 6 roubles, and thinks he has made a good bargain. Sable, fox, and otter skins, and also musk, are the principle objects of this traffic. The average price paid for a sable skin is 5 roubles in money or 2 roubles worth of goods, say for instance 3 lbs. of powder and 5 lbs. of lead. A fox-skin is sold as dear as a sable. Other skin costs 1 rouble the *tchetvert*; an otter-skin

weighing 5 *tchetverts* costs 4 roubles, etc. The musk from a full-grown deer, 3 roubles, or say 1½ rouble in *truck*. These prices of course vary; in 1888 sables were 3 roubles each at Nikolaevsk, and a musk bag rouble 75 *kopéks*.

As yet only one Orotchi travels with furs for sale, although the Russian Government are trying to induce them to do so. He not only journeys with his own furs to Nicholaevsk, but he buys up furs from others before he starts. Ordinarily the merchants come to Port Imperial from the Amur to get them. The journey by land can only be made in winter, when sledges can get about; at other times of the year the roads are impassable. The sledges, long narrow vehicles called *nart*, are drawn by dogs. Each merchant travels with a train of 3 or 4 of these *narts*. The traces for coupling so many dogs are about 20 feet long. Ten dogs can easily track 20 *puds* (over 700 pounds) of goods and the driver's weight into the bargain. The driver sits astride of the sledge, with snow-shoes on his feet rather shorter than what are used for journeys on foot, steers with an iron-pointed pole, and shouts to the two leading dogs in a peculiar vocabulary which they perfectly understand. There are three roads, the first passing a little North of Habaroffka, by the Doudon or Neikhe, an affluent of the Amur River, the second by the Khungar River, and the third over Lake Kizi and Rivers Yai and Muli.

The Russian Government is endeavouring with some success to educate Orotchis into traders who can take their own goods to Nikolaevsk and other places for sale, for at present these simple people are, as already mentioned, badly exploited by certain Russian traders as well as by other Asiatics such as Nandza and Goldis.

All the Orotchis of Port Imperial and neighbourhood are nominally Christians of the orthodox (*i.e.* Greek) Church, and a few of them know how to cross themselves, but their ideas of the Christian religion are of the vaguest. Missionaries of

the Greek Church have been among them three times; the last time was eight years ago, so none of the children under eight years old have been christened with Greek names. A few own a cross hidden somewhere away. In some of the remote districts the grown-up people, accustomed to using their Orotchi names among themselves, have difficulty in remembering their Christian ones; when they meet foreigners, one will stammer out, for instance, after looking round the rest for some one to prompt, *Trilka* (*Kirilka*, "Little Cyril"). Each in secret follows the pagan religion of his ancestors. MARGARITOFF gives such details on this point as follow, with some diffidence, as although he did his best to check the information received from one native, by questioning many others in succession, religion is a hard matter for two people imperfectly comprehending each other's language to confer about.

The Supreme Power is called Anduri; to Anduri they pray for food, help, and counsel in visions. They consider Anduri to resemble a man in external appearance. [This is the Manchu word *Enduri*, which appears to correspond rather with the Chinese word 神 and along the Amur and Ussuri River *Enduri* is the word used.] Anduri is *the Anduri*, or *Spirit, par excellence*, who dwells in the sky, called Boà Anduri, the *Boà* being the Mongol word. There are secondary gods who serve the supreme one; thus *Temu*, God of the Sea, Kamtchanga, God of the Mountains and Heaths (*taiga*). As sea and wild desert are all that the Orotchi has to look upon, it is natural enough that he should have only these three gods. In their minds Temu and Kamtchanga are not only less powerful, but less magnanimous, than the supreme god of the sky *Boà*. "Anduri," said a native to MARGARITOFF, "ordered Kamtchanga to watch over the *taiga*, and not to allow it to be spoiled or made use of beyond our necessities." Kamtchanga too jealously guards what is entrusted to him, and he is even unwilling to allow the poor hunter to take anything out of the

taiga at all. When the Orotchi prays to Anduri, scatters his cakes and pours his *vodka* on the ground before starting on his winter sable-hunts, the cakes and *vodka* are to propitiate Kamtchanga, the prayers are for the great Boà Anduri. In like manner before beginning the summer fishing the Orotchi addresses a prayer to Anduri, and throws into the sea or river old *yukola* and cakes for the jealous guardian of the deep waters—Temu.

The inferior deities of land and sea have both been seen by men.

Once a rich Orotchi strolled into a great forest to gather fir-cones for his pastime. He soon had a whole bagful of them, and sat down to eat nuts under a tree, but as he was not very hungry, he threw away more than he ate. Suddenly appeared Kamtchanga like a colossal man, and saying "Why are you stealing the fir-cones?" took the poor Orotchi by the shoulders and carried him away into the mountains. After a time Kamtchanga arrived at a deep rock, which had a cleft in it; the cleft widened, and Kamtchanga, with the Orotchi on his back, entered. Inside he found himself in a large, handsomely furnished *yurt*; there, said the narrator to MARGARITOFF, were many *mamkas* (women) and many children. The Orotchi was frightened and did not know what he ought to do. Luckily he remembered that Kamtchanga, by order of Anduri, was forbidden to touch the blood of human beings; he took out his knife and cut himself in the breast, and smeared himself all over with his own blood. Kamtchanga seeing what a sharp customer he had to deal with, wanted to get the better of him; so he rolled him up in birch bark so as not to get the blood on his own hands and carried him off to a stream to wash him. He left him in the water a long time, then picked off his clothes, put on clean ones which he took off himself, took him back to the rock and gave him some meat. The Orotchi knew that if he ate it Anduri would cease to protect

him and he would never see his home again, so he refused to eat it in spite of all Kamtchanga's invitations and even threats, and fervently prayed to Anduri. Seven days passed without the Orotchi daring to eat or drink anything. At last Kamtchanga got irritated at his obstinacy, fearing he would die of hunger, and carried him to the place from which he had taken him. The Orotchi threw away all the nuts with the bag, went home and related the adventure, adding, "Anduri preserve me from seeing Kamtchanga again!"

Temu, God of the Sea, has also been seen by human eyes. Once on a time there was an old Orotchi who lived with his old wife and a young son 20 years of age. They were well off, had many sables and silk robes. One day they went out in their canoes to get seals; the old man paddled a little ahead, his son behind. Soon they saw some seals: the old man went in chase of one, his son of another. After a fruitless chase the father stopped, looked round, and could not see his son. He thought he had capsized, but neither *canoe nor man* was in sight; he went ashore, and there also found no traces of the youth. Days passed, and he did not return. Two years passed; the old couple were worn and thin with care and hope deferred, and still continued their search. The third year one day they were in the very bay where he was lost; they sat weeping on the rocks and praying Anduri to help them. Suddenly Temu appeared sitting on some rocks not a stone's throw from where they were; he appeared as a gigantic man with long white beard, and asked, "Why are you weeping so bitterly?" The old man having overcome his natural first terror, told the story of their loss. Then Temu told him that his son was alive and with him, Temu, and if the old man wanted to see him, let him within the following night build a new *yurt* on the shore, and his son would come to him in the *yurt*. Having declared these conditions, Temu threw himself into the sea and disappeared.

The old man sent his old wife off home, and set to work at the *yurt*. The work was arduous, but hope gave him strength, and it was built before the dawn. The old man then lay down in it exhausted and tried to sleep, but suddenly the door opened and from outside a cradle was thrown at his feet, enveloped in cloth and tied with a rope. He unwound the cloth, turned down the coverlet and beheld a baby just like his son had been in infancy. The delighted old man took it to his wife, who fed it with fish. The child grew bigger, not every day but every hour, and in two years was reproduced the lost son of 20 years old; and all lived happily as before. Now this son had been, when he was lost, in chase not of a real seal, but of a huge fish in whose jaws was the dwelling of Temu. "Yes," said the Orotchi narrator, "any "Orotchi might see Kamtchanga or Temu, but to see Anduri "one must be a *Great Shaman.*" The *shamans* are almost identical with the *medicine men* of the American Indians. A *Great Shaman* must be a man who can bring himself by enduring torture to the necessary insensibility of nerves and contempt of earthly comfort and convenience. He begins by burning in the ever-smouldering fire of his *yurt* a kind of grass, giving out a stifling blinding smoke. He half closes his eyes, or binds a fillet before them so that his internal contemplation may not be disturbed by visible objects. He ties round his waist a short red canvas skirt fastened with a girdle. The girdle is hung with dangling jangling iron rattles, "corals." In his left hand he takes a drum over two feet broad made of the skin of a young reindeer, and in his right a flat roller wound in the dressed hide of an elk's foot. Standing just inside the door in the stifling smoke he begins to smite the drum in slow single strokes to announce that the *shaman* fit is coming on him. Soon from his mouth mysterious whisperings of sounds issue understood by no one, not even by himself, *Cho*, *Cho*, *Cho*, *Shi*, *Shi*, *Shi*, and so

on, interspersed with hideous howlings, and the boom of the drum. Then there is a lull, after which the horrible sounds begin again, louder than before, as the *shaman* rushes round and round the fireplace in a kind of three-time dancing step, first striding out long with one foot, then after two little steps striding out long with the other foot. His body quivers ever more and more violently, and the iron ornaments hanging from his belt clash loudly together. The noise made by a *shaman* when under this influence, whatever it is, may be heard more than 3 miles away at night over the silent *taiga*. At last, fearfully yelling, he ceases to run round the fire, takes up his stand at the door again, and beats himself on the head or on the trunk. He then starts off again on his wild polka round the fire, and after half a dozen circles stops and punishes himself again. After an hour of this maniacal conduct, his face looks disfigured, his eyes look terrible, sweat pours from him, his long howls have become hoarse broken yelps, which combined with the rattle of the iron and the hollow boom of the drum, work on the nerves of any one who has not seen a possessed *shaman* before, with terrifying effect. Finally the *shaman*, with a parting bang on the drum, hurls it from him, gives himself a mighty blow on the head and rolls exhausted on the couch. His family make him as comfortable as they can and stow him away to sleep or meditate, and not till the next day is he asked what communication he received from Anduri. In some cases the *shaman*, especially if a woman, falls ill or goes mad after a nocturnal *possession* of this nature. MARGARITOFF was shown a woman, an ardent *shaman*, who one day after such a fit forgot her mother tongue, spoke in one unknown to the Orotchis and only two months afterwards began to pick up her own language again word by word as infants learn. What would she have become if her husband had not removed

all her *shaman* paraphernalia out of her reach and absolutely forbidden her to *shamanize*?

A seer who considers himself to have received inspiration during his raving, sometimes will preserve a morose silence on the ensuing day, and sometimes will impart to his tribesmen a prophecy, say how many fish there will be next season—few or many—will a ship arrive, etc., etc. He sometimes guesses right, and of course the oftener this occurs, the more convinced he becomes of his own capacity, and the more he is honoured by the rest. He is called to see the sick, to divine where a lost article is, or to point out a course to avoid threatened misfortunes. A *shaman* in repute grows naturally a regular drone, who does nothing but *shamanize*. It is as curers of diseases that the supernatural abilities of one of these sooth-sayers are most in request. The *shaman* soon after a fit visits the patient, and ordinarily prescribes the making of a wooden idol—a bear, swan, tiger or other representation—and the setting up or hanging up of the same in the place indicated for that purpose, where the patient must see that the idol is well provisioned with frequent offerings of fat. Such idols, often suspended at the end of long poles, may be met in every village. Some are large enough to be called statues, and these, located in special enclosures are apparently worshipped as gods. The prescription is scrupulously followed until the patient either recovers or dies; in the latter case, the explanation is ready; the patient has not accurately enough carried out the injunctions communicated to him by Anduri through the medium of the *shaman*. There are but few *shamans* credited with power among the Orotchis; the most renowned ones come to them from the Goldis on the Amur River; there are many who go through the forms described above to obtain inspiration, but they are not considered to have much success. The Orotchis say plainly that these men are humbugs; when an Orotchi proper makes night hideous

with his drumming and yelling, they are apt to mutter to one another, "So-and-so has begun *to play the fool*." A prophet receives small honour in his own country. Under the influence of Christianity, or perhaps to please MARGARITOFF as a Russian official, many Orotchis spoke of the practice to him as charlatanry, and even named the influence at work as not Anduri, but *Amba*,—that is to say, the Devil. Of this evil power they conceive that he is all-seeing but not all-powerful. He is ever watching for a chance of doing people an injury or thwarting their designs. Another name for him is *Ganki*, but this is more used of men as a term of coarse abuse. The evil spirit which dwells in gloomy forest depths, in deserts and in abandoned ruined *yurts* is *Shaka*; but this demon can only injure those who trespass on his domain, and "molest his ancient solitary reign." MARGARITOFF found it impossible to get the people to say much about the native theories of the order of the creation of all things, and the first appearance of man in the world. "Perhaps Anduri made it all, and he knows," they said, "but we Orotchis do not understand anything about it." It is a subject which they prefer to evade if possible. MARGARITOFF has in this connection arranged the following stories in the order which they appear to him to have, though he heard them separately, as he believes them to form a connected series.

(1.)—A long, long time ago, there were three suns in the sky; it was so hot then, no one could live on the land; there were men, and there were beasts, but the men lived in the water, and could walk on the air. At last men or a man grew tired of this aquatic existence, and took bow and arrow to shoot at the sun. At last two of the suns fell to his shots, fell hissing into the water and were extinguished. The earth became cool enough to walk upon, and presently grew clothed with the *taiga*. The porous or spongy stones still found on some of the mountains are a relic of these piping hot times,

Such stones had evidently once been so heated that they were actually in flames.

(2.)—Another legend has the shooting of the two suns, but adds that then man lived like a wild animal, with neither clothes nor cookery; other animals lived with him in company and he knew no more how to speak than they did. All the rivers had two currents, one flowing along each bank, in opposing directions; the wind blew from all quarters at once, the trees were hard as stones, and stones would burn like trees. In short, all was in a chaotic state. It was *the otter* who prevailed on Anduri Boà to change all this. The otter was then a land animal; she was swimming a river with her cub; near the middle the otter was carried one way, and her cub in the opposite direction, and lost in spite of her efforts to keep him in sight. After looking long for him she went to Anduri and besought him to order things better in the world, telling him of her loss. Then Anduri commanded the otter to live for ever after in the water, only allowing her to pay visits few and far between to the land and watch how other animals live, and Anduri then introduced the system and order which we know now, set man at the head of all animals and gave him the right and the power to control and make use of them.

(3.)—At the beginning man lived quite like the animals, uttered the same cries, and no man feared or obeyed another man. There was no order then. Then Anduri divided the animals into kinds (*genera*), and put man in a class apart and at the head of all. The man built a *yurt* and lived in it at first all alone, catching fish and sables and praying Anduri to give him power over all living beings. One day the *duck* (*Kiotcha*) came into the *yurt* and laid her head on his knees as he sat. At first he was minded to kill her, but seeing her so gentle and fond, he kept her and fed her well instead. At last she grew very large, could understand

what the man said, and even began to utter sounds much like human speech, till one day she put on clothes, and became a woman, of whom the man made his wife. In a few years they had a son and a daughter.

(4.)—At first death among men was unknown, but one day a young Orotchi, the son of a *shaman*, crawled up a high rock to get the eggs of a sea duck. The rock was high and slippery, and coming back with the eggs he slipped, fell, and was killed. The *shaman* murmured that only his son had died, when no one else died. Then he had a *shaman* fit lasting a long time, and at last he went away to the mountains, dug a deep pit in the ground, and said: "Let deep pit be the road to Bunni Boà," *i.e.* to the unseen life where all must go sooner or later. Bunni Boà is another world containing land, *taiga*, sun, water, and supplying without labour everything a man can require. Those who go to Bunni live there a very long time, then they die there and their souls rise like smoke to this upper world again and are re-incorporated in new-born children. In the nether world, besides Bunni Boà, or paradise, there is also Okki Boà where those who have led bad lives meet with their deserts. In Okki Boà it is always dark, cold, and famine-stricken. The roads in the nether world are winding and difficult, and it is only the souls (*miya*) of the good who can find the road to Bunni; the bad always come upon Okki.

The Milky Way is said to be the tracks of the snow-shoes of a mythical personage who was allowed by Anduri to search there for his lost parents, when parents and children were first parted by death. The first duty of the relatives is to shave the dead, to wind face and head in a kerchief, generally a dark blue one, and to put on the body its best attire, and the second to cut or tear the collar of the coat, the pantaloons at the knees, and the *chaussure* at the toes, so that he may have to receive a new costume when he reaches Bunni, the unseen nether world. If the departed was rich, some silken cloth or

brocade which he owned is wrapped outside him. Rich and poor alike are wrapped in birch-bark, sometimes three or four turns being taken, the object of this being to protect the corpse from external moisture. Birch-bark is also spread at the bottom of the coffin, and heaped up inside before the lid is put on. In it are laid beside the body its property, spear, arrows, knives, and the body of any sable, otter or fox which the man left behind him. Axe and kettle are also laid there, the kettle stuck on the feet. The canoe, harpoon, snow-shoes, etc. are laid outside the coffin close to it and surrounding it. In the coffin of a *shaman* are deposited all the paraphernalia of his profession, but first broken and rendered useless. In the coffin of a woman are laid her feminine house gear and appurtenances. The Orotchis believe that the spirit of the departed hovers round his ancient dwelling for a fortnight among his relations and acquaintances, therefore nothing which belongs to him is touched during that period, while when food is taken or tea drunk, his cup and platter are also filled, and placed before his accustomed seat in the *yurt*, to be taken away each time after the repast and poured as a libation in the *taiga*. Some people carry the food to the coffin during this first fortnight, and leave it there till the time for the next meal, when it is changed, etc.

When the two weeks have elapsed, all the propertywhich can be used is taken by the relations for themselves, and all which is useless is burnt. The vessel which held the food is left by the coffin. The coffin is made of larch planks secured with wooden nails. It stands between 2 and 3 feet above the ground, resting on wooden supports, except in the case of children, when it is sometimes placed in the fork of a tree. When the family has many working hands, a shed is sometimes built over it. A very few of these frame-houses are of pyramidal form. A few are built like a small round conical topped *yurt*. These sheds are generally placed over the bodies of *the drowned*. With

regard to the drowned, it is a custom if the body is not found within 2 years, to carve a wooden image in the likeness of the deceased, coffin it and give it sepulture under these small conical *yurts*.

So many of these have been burnt in forest fires during the last 4 or 5 years, that the Orotchis are beginning to bury their dead under ground, generally defended by planks from the attacks of wild beasts, but sometimes in a boat. They are always laid to rest face up and *head to the West*, with hands stretched by their sides.

Marriages are conducted on strictly business principles. The previous life of the bride is not carefully enquired into, and the existence of love is considered superfluous. The one essential is that the price—the *kalüm*—be forthcoming. It is not necessary for the young people to have seen each other before the nuptials, and a match is often pre-arranged by the parents while those who are principally interested are still children. It is only those who are without parents, and who are not in dependence on older relations, who can choose for themselves; and the number of girls to choose from is so small, that independent swains are generally glad to get anyone, without exercising their right of selection. The number of women is so small that there are many unmarried men, as the wives are bought up by the most wealthy, one of whom will sometimes even keep 3 or 4, but this is rare, and the subsidiary wives are generally left by the man's brothers who have died. Some rich men buy women to be ready as wives for those who are now only children, and hence a wife is often nearly twice as old as her husband. A poor father sometimes sells a daughter when she is just out of the cradle. The earliest age for marriage is 17 years for a boy and 12 to 14 for a girl; but the match is often pre-arranged and the money paid long before that. The price is sometimes taken out in *labour*, and a lad will work in a house where is growing up

a little girl who will one day be his wife. In some cases, the debt is not paid by the time the marriage-day arrives, and he works on for his father-in-law till he dies.

The *kalüm* (price of the bride) is generally made up in sables, silk, and domestic utensils, as pots, tea-kettles, choppers, and in provisions—*yukola*, tea, flour and so forth. About 50 sables, three pieces of silk and a kettle make up the average price of a bride; of course some are dearer, some cheaper than this; when once bought she becomes the property of the husband's family, and if he dies she becomes the wife of his youngest brother, and passes into his *yurt* with her children. Failing a brother, she becomes the wife of the next near relation of her late husband's. In this last case she has the option of returning to her father, who then has to refund the *kalüm*—the price originally paid for her. Her children, however, remain with her husband's relatives. As the father of the widow is not always in a position to refund the *kalüm*, practically it is refunded to the relations of her late husband by anyone who wants to marry her. An old Orotchi, known as Alexis, bought for his son, 20 years old, a wife of the same age. The same year there was another son born to Alexis, and the duty of nursing this infant devolved on the new daughter-in-law of Alexis. A year passed and by the end of it both he and his elder son had fallen victims to a mortal epidemic. By Orotchi custom the young widow had become the wedded wife of the child she had just ceased to suckle. Just then Otcho, a distant relative of Alexis, returned from a journey, and declared his right to the old woman, widow of Alexis. Taking the old widow as his wife, he was bound to receive into his family and care for poor Anna with her year-old husband and nursling. Before long the relations of Otcho with Anna were of a compromising nature, and the older widow complained to MARGARITOFF bitterly of her husband's fickleness, and by his advice she waited on a *starshiná* of the village, who was

passing through to Nikolsk to buy goods, and begged him to take her part. The *starshiná* assembled the other elders, including the *starshiná* of Datta, the hamlet where Anna was born. A formal trial was held, at which MARGARITOFF and the oldest Russian soldier were present. Otcho was condemned to 100 strokes of the rod, but the punishment was commuted to two days in prison in consideration of his old age; the old widow, the baby husband and Anna his grown-up bride, were sent away from their village on the Khode River to Datta to Anna's father, who was enjoined to keep a careful watch over his daughter's conduct for the future.

At the same sitting were heard two other cases, bearing on Orotchi family life and customs. (1) An Orotchi had died leaving a wife with three boys, one 12, one 10, and the third 3 years old. The nearest relative of the deceased wished to marry the woman and adopt the family. She declined and married another man, who accordingly paid the nearest relative the due *kalüm*. She did not wish to be separated from her children, but Kapelda, her first suitor, took them away by force and threatened to kill her new husband if he claimed them. Kapelda, a lazy rascal, was only really interested in the eldest boy, as the others were too young to work for him, but he kept them too, to spite his successful rival and the woman he had wanted as a wife. He treated the children very cruelly, once hanging up the smallest over the fire, and would not take him down till the next eldest declared he would beg the *starshinás* to let them both go to their mother. The mother hearing of this cruelty tried all she could to get the children away, but none of the Orotchis, wedded as they are to their ancient customs, would help her to take the children from him who, according to the old native law, was their natural guardian. MARGARITOFF humanely came forward and threatened to inform the great Russian, who would send soldiers and march him off to Habaroffka to

prison. Kapelda took fright and gave up the children, but MARGARITOFF, fearing there might be more trouble when he was no longer there to take their part against the brutal Kapelda, had the case laid before the Court then sitting, Trishka, brother of the unfortunate mother, appearing for her. After hearing both sides and the evidence of witnesses, the Court decided that the eldest boy should remain with Kapelda and the two youngest should go to their mother, this being a special favour allowed to her because it had been proved that Kapelda beat them. Kapelda and his brother Tchaika got a day in gaol for threatening to kill Trishka and the husband of the children's mother.

(2).—Kirill (Cyril), a bigoted old native, had a son Sergius, married to a young woman named Marfa. A year before, Sergius, while hunting a seal, had been dragged from his canoe and drowned. As old Cyril had no other sons or near relations to whom he might transfer Marfa, she went back to her father, taking with her a 3-year old son. Basing his claim on Orotchi law, Cyril demanded this child, and also the refund of the *kalüm* which he had paid for Marfa when he bought her as a wife for his son Sergius. The plucky Marfa, happy in the chance of having been wedded to Sergius by a Russian priest who had happened to come to the village on the Tundja River, produced the priest's certificate of her marriage, and claimed that Russian law should be enforced instead of native law. MARGARITOFF and the soldier were examined as experts, and after a long palaver of the Court, judgment was given that Marfa should keep her son, old Kirill having the right of appeal to the *Ispravnik* (Commissary of Police) at Sophisk, and getting back the dowry as soon as Marfa got another husband.

The last case was the adjudging of 50 strokes of the rod to a youth of 18 who had used insulting language to an old man, and this correction was summarily inflicted.

The *birth of children* is a subject of great rejoicing among the Orotchis, and a girl who can bring in a good price from her father-in-law or husband is as welcome as a strong-armed boy. A small conical *yurt* is provided for the *accouchement* in good time, apart from the dwellings, and named the *yataku*. Here the wretched mother remains in some cases 5, in others the 10 days after the birth: on the last day she washes the child, dresses it and hands it out to the nurse, who carries it to the father's *yurt* and presents it to him there. The mother then puts on clean new clothes, first burning in the fire those she had on before, and joins her husband again. The husband then closes the *yataku*, and bars it up with timbers to prevent dogs getting in. Although a birth does not properly speaking constitute the occasion for a feast, there is generally a good deal of eating and tea-drinking going on about this time; the *yurts* are full of friendly or inquisitive visitors, and an Orotchi never refuses the bite and sup to people who drop in this way. The children have two sorts of cradles, the wooden day cradle keeping the baby in a sitting posture, the birch-bark night cradle allowing his little limbs to be extended. He is snugly tucked in with soft moss, shavings and chips, and rattles composed of bones, teeth and jawbones of wild animals, hang from the cradle and divert his infant mind by their clattering when some one gives the cradle a swing. The children are treated with great kindness, but also firmly, and no child would dream of arguing the point with its mother.

Illegitimate children are despised outlaws whom any one may molest, or even kill, without fear of punishment. *Tuksa-si-la*, "Oh, you foundling," is a term of abuse.

The festivals of the Orthodox Eastern Church are unknown to the Orotchis, and of their own savage festivals only one has still survived—the Bear Feast.

When winter is more than half over and the sable-hunting has nearly ceased, some Orotchi, who has been rearing a bear

in a large cage with that intention, announces a feast in honour of the animal, and invites all the inhabitants of the surrounding settlements. Any one who catches a young bear-cub in the *taiga*, considers it his bounden duty to rear it for about 3 years, so as at the end of that time to kill it publicly and eat the flesh in company of all his friends. A man who has been thwarted in his announced intention to give a bear-feast by not having the animal ready, will often give roubles worth of furs to buy one so that the public may not be disappointed. The nominal occasions of the feast are various, it may be because Anduri has been good enough to send many sables of late, or in honour of some worthy father who has died leaving an inheritance to his children, or perhaps some other occurrence worthy of record and celebration. The *bear-feast* being a *public* feast, although organised by one individual, they try to have one in each Orotchi village every year in turn; thus in 1886 it was held in Datta, in 1887 at Vi, and in 1888 at Koppi. They get the bear out of the cage for his preliminary wash very skilfully. A *reata* with a slip knot is let down through the top of the cage over the bear's neck, and two more nooses for his front paws. Hauling Bruin in three directions, and keeping him just taut, they remove the roof of the cage, and a nimble native lowers himself astride on his back and girds him a little aft of his front paws with a stout girth, to which a long rope is made fast. All then pull with a will and the bear is dragged out and taken wherever they like. Gloriously fed up, and wreathed all over with gay-coloured ribbons and glittering ornaments, he is led in triumph to the huts. All who take part in the procession are armed with lances, bows, and arrows. When *Mishka*, as the Russians affectionately call the bear, reaches the *yurt* of the giver of this popular *prazdink*, bear and bear-leaders are treated to something good to eat and drink, and if the *impressario* be a well-to-do man, they

process round a few more times, bringing up again at the conclusion of each round to *re-bait* at the door of the *wigwam*. This goes on morning and evening for a few days, until all the huts, not only in that village but also in the next one, have been visited, and there is nobody left to "invite the bear." These days are given up to sport and noisy jollity. Old Orotchis recall with some bitterness and regret the bygone times when fathers taught their sons not only hunting and fur-trading, but games and sports useful for developing their physical powers and hardening them for the struggle for existence. There were then regular gymnastic professors and trainers. Each youth was taught not only how to shoot an arrow, but how to avoid one intended for himself. Then, only he was deemed worthy of competing in the bear feast who had shown that he could dodge an arrow discharged at him point blank from 15 or 20 feet distance, or even three arrows in succession coming flying from a *yurt* 60 feet away. Leaping, tree and pole climbing, and fencing with spears, were then taught to all the youths. A trained gymnast could clear his own height in the air; or three times his own length along the ground, and could clamber up a tree so quickly and adroitly that an arrow aimed from 70 feet away could never touch him. Now, instead of these good old warrior sports, there are only ball-play, archery at a mark, and dog-races. These last are the only ones that the old fellows do not consider unworthy of a former generation. The dogs run drawing the *narts*, or sledges of the people, and amongst the excited spectators many an intending dog-buyer keeps a *connoisseur's* eye on the performances of the couples, especially the two leaders.

The whole feast ends with the tieing of the bear to a tree or wooden pillar to serve as a mark for the arrows of the crowd. The giver of the feast has the first shot and immediately after him the crack marksmen of the table. They

begin at about 70 yards, and diminish it if necessary to 20 yards or even nearer than that. In those rare cases when even at such a short distance the bear is not killed, the giver of the bear feast finishes him with a vigorous thrust of his spear. Bonfires are then built and the meat is soon roasting on spits, and the crowd sit round and all share in the feast. Amongst some of the Orotchis those of the Tundja River, women take part in bear feasts, while among the Orotchis of the River Vi, the women will never even touch bear flesh.

While on the subject of the amusements of the Orotchis, MARGARITOFF adds one or two old stories with which they beguile their leisure hours. The following has something of a Japanese ring about it to me:—

There once lived seven young brothers and a sister in one *yurt*. One day they were playing before the door, and the game was to throw sticks and try to knock down other sticks stuck in the ground at some distance. While they were shying a squirrel came up and she also joined in the sport. By inadvertence one of the brothers struck the squirrel with his foot, and she got in a rage, and ran away after threatening to come back next day with all the squirrels and kill them all. The brothers were frightened and began thinking how they were to escape from the threatened attack. At last the eldest suggested that they should climb up into the sky; and the rest all assented to the proposal. Then said the youngest brother: "What are we to do with our little sister, as she can't climb up, and it is no good hiding her in the *taiga*, as the squirrels will find her and kill her?" They thought about it and at last decided to dig a hole and put the little girl in, leaving only an opening above her head for her to breath through. On her breast they put a bag full of reindeer's blood, and then they filled in the earth. Then the eldest brother shot an arrow into the sky; the arrow stuck in and hung down. The second brother discharged his arrow and it stuck in the

head of the first, the third then let fly, and the third arrow stuck in the head of the second, and so on until there was a pole of arrows reaching to stretching distance of their hands. Up this they swarmed as up a ladder, one after the other, and the one who went up last, the youngest, took out each arrow as soon as he had a firm grip of the arrow above it, and at last climbed on to the sky with the whole sheaf of arrows on his back. Next day came along the army of squirrels and began to search for the brothers everywhere without, of course, finding them. Then the squirrels asked all the house utensils, the pots and pans, the dishes and knives, one after the other, where the brothers had gone to, but not even the tea-cups or spoons would tell where they had gone. Only a spiteful old pair of *unta* (fish-skin boots) acted the sneak and divulged the secret of where the brothers had gone and how they had hidden the sister under the fireplace. Then the squirrels set to work and drove their long spears into the ground by the fireplace. One spear pierced the bag full of reindeer's blood, and it spurted up. The squirrels believed they had killed the little girl, so after smashing all the dishes and cups they went off again into the *taiga* (the jungle). Then the little girl crept out of her hiding place, and the first thing she did was to take the disagreeable couple of *unta* (the fish skin boots) which had played the spy, and cut them into little pieces. Then she set out to look for her brothers, in a great fright all the time lest the squirrels should came back. She ran on and ran on till she came to a *yurt* where lived Miss Frog. The Frog saw that she had on pretty clothes, and at first made much of her, and then took all her clothes away, and put them on her own ugly body, leaving the poor little damsel with nothing at all to cover her. Suddenly a dog was heard barking, then Miss Frog said: "There come two handsome young Orotchis, one of them will see how nicely I am dressed and will ask me to marry him, and they will

turn you out in the cold." So saying she left the hut to meet the young trappers and the poor little girl, from grief and despair, began to beat herself on the head with a stick. The stick split open and she crawled into the cleft and hid herself. Then in came the two fine young hunters, and the elder sat down to talk to Miss Frog, and the younger sat down in the corner close by the stick, where the dear girl was hidden. Out of sheer idleness he took the stick and began to whittle. Suddenly blood came out, and he was scared, threw down both his knife and the stick and ran out of the *yurt*. The elder at last noticed that his brother had gone, and he too set off home, taking the frog with him. The younger now remembered that he had left his knife in the *yurt*, and went back to fetch it. When he arrived at the door, he thought he would first look in and see if there were any one there, when he saw the poor girl sitting there all alone weeping. He opened the door, went in, and took hold of her; she tried to hide herself in the stick again but could not. Then she told him all about her brothers, and how the frog had taken away her clothes. He gave her such of his as he could spare, and took her away to his father. The old man was waiting for both the brothers; the elder was the first to return with the frog. The old man began to ask her about her family, who they were and where they lived. The frog then stupidly began to brag about her brothers and said, "I will soon let you see them, lend me this pail!" Out she went with the pail to the river side, drew it full of water and frogs and came back to the *yurt*. As soon as the old man saw what brothers she had, he drove her out of his wigwam, and began to ask the little maiden about *her* brothers. She went out into the *taiga*, stood under a tall birch-tree and began to pray to Anduri. Anduri heard her; her seven brothers came to her, and each brought a beautiful rig-out of new clothes. She put on the frock given by the youngest of them, and she led the whole seven to the

old man. As soon as he saw her coming with them hand in hand, he spread a great piece of silk at the door of the *yurt*, received them all with open arms, and spread a feast. They only stayed three days; they told him that their home was now in the sky with Anduri, asked him to treat their sister kindly, and then departed, while the sister lived happily ever after with the old man's youngest son.

Of historical events the Orotchi has but a poor recollection. Not only do they interest themselves but little in the long past and gone, but even occurrences 5 or 6 years old are generally consigned to oblivion. A few things which have passed recently under their own eyes are remembered, for instance the wreck of the frigate *Pallada*, the wintering in Port Imperial of the Mandgar, etc. But a mother will quite forget how old her child is after it has reached about the age of 5, and give the vaguest replies to questions on that point. An old Orotchi will indicate dates thus: "When the Russians first came here, I had a son, just able to walk," or "just able to trap sable." Owing to this vagueness it is of course very difficult to obtain information as to the mortality in any particular year. At last MARGARITOFF after repeated questioning obtained from an old native particulars of the number of Orotchis living on the Rivers Khode and Mai in the year the "Pallada" sunk, *viz.* in 1856. According to his list—he gave the names of every one on these two rivers—there were then 56 men and 48 women. The population was in 1886 little more than a quarter of this, and there is little doubt that the diminution in the population has been quite as great on the other rivers. The principal cause of this is the severity of the conditions of life. The principal diseases prevalent are exematose and rheumatic, but epidemics, small-pox and typhus have also been known. The *yurts*, composed of a few poles, fish-skin and birch-bark, give sufficient protection from rain and snow, but hardly any from cold and wind, which penetrate

from every side, especially in winter. In spite of the too abundant ventilation the air breathed is anything but pure. The smell of smoke and of fish, fat, dirty clothes, leather, dressed and undressed, and of the unwashed inhabitants themselves, combine to render the atmosphere almost insupportable.

The Orotchis are small in stature, 5 ft. 4 in. being considered a fair height for a man, and 4 ft. 10 in. for a woman. They have great endurance, being able to row for 6 or 7 hours at a time without resting or feeling fatigued afterwards. Strange to say, although their life is so much on the water, they cannot swim at all, and if one capsizes from his canoe "he goes to the bottom," to use their own expression, "like a wounded seal." They have small heads, straight low foreheads, broad faces, broadest at the cheek-bones, and scanty black hair. They are broad shouldered and look clumsily built, but are capable of great agility when excited by hunting, etc. They can descry a fish two feet under water from their boat on a foggy day, and throw a harpoon at fish at that distance with unerring aim. MARGARITOFF gives here two tables of measurement, one of 50 living subjects, and one of the 17 skulls which he collected, and he concludes with lists of words and phrases.

A COMPARATIVE TABLE
OF THE
ANCIENT LUNAR ASTERISMS.

By T. W. KINGSMILL.

Astronomical history may be said to have had its beginning about the year 2150 B.C. when the astronomers of Chaldea substituted solar for lunar observations and marked out the zodiac into the twelve constellations which with little change still hold sway. Prior to the introduction of the reform the moon had kept guard over the calendar, and the commencement of the year was connected with the position of the full moon in the zodiacal asterisms. Owing however to the fact that the anomalistic month, the period in which the moon makes the complete circuit of the ecliptic, was not commensurate with any number of solar days, being about an hour and eighteen minutes above twenty-seven and a-half days, a difficulty was always experienced in the accurate division of these asterisms, which were made to vary from twenty-seven to twenty-eight. Gradually the latter number seemed generally to have prevailed, though the Indians seem frequently to have preferred the lower number twenty-seven. This however is of little consequence, as the principal asterisms are sufficiently well marked in all. There seem to be evidences of a former very wide extension of the division of the lunar zodiac. In China the 宿 *suk* or lunar stations have held their own in popular language to the present day. Indian astronomy hands down their history from very early times,

and the *Bundahesh* tells of their existence in ancient Persia. In Arabia they have come down as the twenty eight *manâzils*, and the *mazzaroth* of the books of Job and II Kings have by competent authorities been interpreted to indicate their extension into ancient Chaldea and Palestine. We may therefore reject as frivolous the strife between authors as to their birthplace, and accept them as in the widest sense of the term Asiatic, and date back their origin to the prehistoric tribes of Central Asia before the great dispersal of the Aryans.

There are evidences that the older astronomy did not yield without a struggle to its more modern rival. As in Europe in the sixteenth century, the illiterate crowd demanded back the ten days which they alleged had been stolen from them by the reform of the calendar, so we find in India that the substitution of the constellations in conjunction for those in opposition was held to be an interference with the course of the heavenly bodies. Thus we learn that when Balarâma, the Indian Hercules, was about to be born to Vasudeva of his wife Devakî (the stars in the right leg of Bootes) the king of Mathurâ, who had been warned that a son of hers would kill him and overthrow his kingdom, seized the pair, put to death their six children already born (the months) and imprisoned Devakî, waiting for its birth to kill the yet unborn child. By divine agency the child was transferred to the womb of his other wife Rohinî, who was still at liberty and so escaped destruction. A comparison with the list of Chinese asterisms, where 角 *Kioh* (Spica) in conjunction with Devakî is still the first asterism marking the vernal equinox, throws light on the astronomical character of the myth, which however from its mention of Devakî can hardly be older than the second century B.C.

Fragments of similar myths remain here and there in Chinese lore. Thus the *Shu king* [III. 1. "Songs of the Five

Children"] tells us how T'ai k'ang went to hunt to the south of the Loh, whence for a space of some ten decades (of days) he had not returned. Coming back to the Ho he finds his passage threatened by the great hunter I, prince of 窮 Kiung (the Empyrean), who dethrones him and seizes the government, which he holds for twenty-seven years. The story is easily explained. The sun (T'ai k'ang) at the autumnal equinoxes crosses the equator and wanders 遊 amongst the southern constellations; coming back at the equinox he finds the great hunter Orion pointing his bow at the equinox (at about 1600 B.C. in R.A. 3. h.) The rule of the usurper for twenty-seven years does not appear in the *Shu king*, it refers plainly to the twenty-seven (or twenty-eight) *suk*, *i.e.* a whole solar year till the next vernal equinox. I is in Chinese lore the archer *par excellence* who always draws his bow to the full and will not change his method. He appears in connection with the fabulous emperor Kuh, and in the myth of Yao we learn he shot arrows into the air to deliver the moon during her eclipse.

As the Greeks, following the Babylonian epic of Gisdhubar, tried to make history out of the astronomical legend of Hercules and his twelve Labours, founded on the progress of the sun through the twelve zodiacal signs, it is not surprising that we find similar myths wrought into the so-called early history of China. Thus we learn that the especial solar hero of China, the great Wu shun, had to undergo his trial of twenty-eight years before attaining the rank of Ti, going in fact through the twenty-eight zodiacal asterisms. In the spring (the second month) we find him at the eastern Yok (T'ai tsung) the vernal equinox, represented by the T'ai shan on earth as by Aldebaran in the heavens. In summer (the fifth month) we find him at the southern Yok (the solstice), represented below by the Hwang shan, above by Regulus. In autumn (the eighth month) he gains the

western Yok, on earth the Hwa shan in Shensi, above Antares, the autumnal equinox, while in mid-winter he attains to the extreme northern limit, reaching in the eleventh month the northern Yok, the winter solstice, on earth the Hang shan in Shansi, and in heaven represented by the star Fomalhaut. He it is who in Chinese lore instituted the twelve 州 *chow* divisions (of the zodiac), raising twelve mountains (the signs), and demarcating them by 川 *ch'ün* (rills), their appointed boundaries. However the myth gained its entrance into China, whether directly from India, or more probably from a common source north of the Himalayas, it cannot be dissociated from the Indian myth of Vishnu, the two names being in effect phonologically identical. The institution of the twelve 州 *chow* (from root *dal*, to divide) seems to show that already the Babylonican division of the ecliptic had penetrated to eastern Asia. In China, till the reorganisation of the calendar under the Hans, it had never received much popular sanction, and the older division has never been ousted from the recollection of the people.

Sundry attempts founded on astronomical formulæ have at various times been made to establish a chronology in China. Some of these bear evident traces of their foreign origin, while others are as evidently Chinese. The most popular makes the state to have begun with ten dynasties, the united number of whose reigns mounts up to 216, evidently related to the number of minutes (21,600) in the great circle of the zodiac. The ten dynastic periods must be referred to the same source as the ten antediluvian kings of Berosus whose united reigns amounted to 120 *sari* of 3,600 years or 432,000 years in all, where the same number is repeated, or the ten antediluvian patriarchs of Genesis v. whose united years, deducting the overlap between the births, amounts to just 7,200 and is still divisable by the ideal number 3,600. As no trace of these computations are to be found in China prior to the Han

dynasty, during a portion of which (the reign of the Emperor Wu) communication was fully established with the Parthian state, which included a great part of Mesopotamia, there is no difficulty in tracing their origin directly to the plains of the Tigris and Euphrates. As we shall see later on, the medium was Persia, and when in the year B.C. 105 the Emperor Han Wu ti finally determined to begin a new cycle, it was to Persia he looked for the annual title. He directed that the first day of the eleventh moon should be observed as the beginning of the new era to which he gave the name of *T'ai ch'u* (Grand Beginning) and intended to substitute for the old cyclical characters a series of names of foreign introduction. Other sovereigns had previously attempted a reform, but had met with so much opposition or been so busily engaged struggling for existence that nothing could be done. From the times of Li and Yü of the Chows (878 to 770 B.C.) no record had been kept; the princes had never proclaimed the commencement of the year, and the people were dispersed or killed at the hands of the hostile tribes of the I and Tiks, so that no one had any clue as to the course of time. In Siang Wang's time three intercalary months were added in the one year 625 B.C., which the *Tso chwen* blames. Afterwards, in the time of the Warring States, till Tsin attained to empire, affairs were still worse. As no written record goes back beyond the year 721 B.C., we may discard all attempts to found a chronology antecedent to that date, a task which indeed Sz-ma Tsien did not attempt, but it is evident that we cannot place any reliance on the calendar even in the early portions of the Ch'un ts'iu period, from the evident mistakes in the times of the solar eclipses recorded, which have all the appearance of having been calculated backwards from crude tables.

The records of even the Chow dynasty I have elsewhere pointed out begin in myth, and the story of the destruction of the earlier line and the removal of the capital from Shensi to

Honan is surrounded with a final coruscation which repeats even to details the stories of the fall of the previous Hias and Shangs. It and the fairy tales of the handsome Muh, of his eight horses, his visit to the realms of Si wang mu (Sumêru), and his feasting with the K'wenlun (Gandharvas), are a fit sequel to the burst of myth with which the record opens, of the Chinese Dioskuroi, Wu and Chow, and the battle against the herdsmen on the field of Mukye, as the rising sun suffused the sky with the bright colours of the dawn. The Chows were in fact a myth-loving people, and their long journey from the land of Pin to their final resting-place at Loh in Honan constitutes an epic quite as fanciful and as interwoven with nature myths as the Iliad itself. Many of these myths I have at various times had the opportunity of investigating, and the same features of reverence for the powers of nature, and the habit more especially of clothing with human habiliments the movements of the celestial sphere, which has prevailed with so many other nations, found here its fullest development. To the euhemeristic character of the later Chinese, who in perfect good faith adopted these myths and sought to incorporate them into history, we owe their preservation, and the critical mythologist can here and there pick out of the purple stream a few relics of hard fact, or genuine tradition which enables him to feel his way cautiously to the consideration of the older condition of the T'ien hia. From earliest times the Chinese have had a lunar calendar, and to the present day the division of the ecliptic into the twenty-eight lunar mansions or *suk* (*i.e.* resting-places) prevails; it is therefore by no means surprising to find that they have entered largely into the so-called history of China. Above I have referred to the case of Wu shun, for so rather than Shun of Wu should the great Chinese solar hero be called, as also to the case of T'ai k'ang and the hunter I, but it is in the so-called dynasty of Shang or Yin, the one representing the

sun when above the equator prior to the time of leaving the Ho, and being phonetically connected with 上 *shang*² (upper), and the latter originally meaning *deflected*, *bent*, indicating its position during the winter half of the year, that the full development of the myth is to be found.

That the names of the so-called sovereigns of Shang and Yin were really astronomical is a fact that has struck most thoughtful critics. With the sole exception of T'ang, whose name I shall explain further on, they are all compounded with the calendaric stems, two of which only are absent; Kia and Ting occur each six times; Kang, Jen and Yih each four; while a single name is compounded respectively with Ki, Jen and Wu. *Tsu* (a beginning), *t'ai* (great), and *siao* (small) account for most of the prefixes, while *lin* and *t'an* are evidently the different renderings of the same word. So far as we know, the Chaldæans divided their year, prior to the introduction of the duodenary system, into ten parts, and it is possible that some trace of this division may have penetrated to China and resulted in the "ten stems." It must however be remembered that in Rome, prior to the time of King Numa, the year was said to have likewise been divided into ten months, so that the resemblance does not necessitate actual connexion. However it was, an old division of the year and probably of the zodiac into ten parts prevailed widely and reached as far as China. The archaic form of the words used to denote the terms forbids any surmise as to their origin, but they must have been in use long before the introduction of the "twelve branches," whose Persian origin is clear. An attempt to effect a compromise between the decimal notation and the twenty-eight lunar constellations probably resulted in twenty-seven of the twenty-eight names handed down. The key has however been lost, and the presumed length of the reigns have been put down in arbitrary figures. The one exception to the cycle name appearing in the list of asterisms

is that at the head—T'ang ch'eng—which may be rendered as T'ang the Completer, the keystone of the celestial arch, completing the year. Accordingly we find T'ang surrounded with all the glories of the solar hero, reproducing exactly the story of Ch'ang, otherwise Wan wang, the founder of the Chows. The state is in darkness, 桀 Kih, the "Cruel" or 癸 Kwei the last "stem" of the previous dynasty (or year) had plunged it in anarchy; he engages the state in a contest with the chief of 施 Shi (Erelus) and the latter, to propitiate him, gives him his daughter 妹喜 Mê hi (Megha, the Clouds). The universe was disturbed; the earth shook; mountains were moved; rivers dried up, while in the heaven itself two suns fought for victory to show their detestation of his acts. Then the people turned to 湯 T'ang—but a disguised form of 暘 or 陽 Yang the Glorious, the sun himself at whose rising the darkness of winter is dispelled and the glad new year begins. T'ang has for his minister 伊尹 I yin, who is appropriately a dweller in 莘 Sin, the "dawn land," for 辛 is phonetically connected with Ushas and Aurora, both names of the dawn. I yin had originally an initial *S*, which leads us to identify him with the Surameya or Hermes of the west, an identification well borne out by his frequent flittings from T'ang to Kwei (light to darkness) and by his reported skill in cookery, to which the legend says he owed his introduction to T'ang. Correcting the so-called chronology by the recurrence of the "stems," and revising in accordance with *Mencius* the common allowance of thirty-three years to T'ai kia, we get a length of 560 years, which is just twenty times twenty-eight, and the lowest number which would permit of the two systems being combined. This would agree with the crossing of the Ho (the equator) by P'an kang, the equivalent of 胃 Wei, the seventeenth *suk*, the autumnal equinox *circiter* B.C. 1600 actually occurring with the full moon in that asterism. The vernal equinox did, 600 B.C., correspond with a full moon

in 亢 Kang, the second of the asterisms, and the fact that we must make T'ang to correspond with 角 Kioh (Spica virginis), which marks the beginning of the Chinese asterisms of the accepted system, points to a late origin for the scheme, possibly as late as 400 B.C.

More primitive in Chinese lore is however the accepted division of the zodiac into 28 *suk* or lunar stations corresponding with the 28 Nakshatras or halting-places of the old Indian Astronomy. The division, as we have seen, is of great antiquity, as it is found not only amongst the Aryans of northern India but amongst the Iranians, whence it spread to the Arabs at a later period. The controversy has raged violently as to whether its introduction is to be referred to India or China, and like many other themes connected with ethnology and comparative philology it has afforded a battle-ground for French and German *savants*. The former, led by BIOT, have generally asserted their Chinese origin; the latter, under the dictatorship of WEBER, have as strongly supported their Indian birth. Professor WHITNEY, on the part of American orientalists, has been rather disposed to favour the Indianists, and in the *Journal of the American Oriental Society* [vol. VIII, 1869] has given a review of the entire subject. Under the auspices of the same Society the Rev. EBENEZER BURGESS in 1860 published a translation of the Surya-Siddhanta, the most authoritative of the Indian works on the subject of the old Indian Astronomy, and to this and Professor WHITNEY'S *résumé* I am largely indebted.

It is fortunately not necessary to revive the question of the Chinese or Indian origin of the asterisms, or to excite any fresh enmity between the contending camps. Both are equally right and equally wrong. The birth of the Nakshatras was in fact prior to the dispersal of the eastern Aryas and Iranians. Indians and Chinese owe their traditions to a common source in Central Asia, possibly not far removed from the ancient

Baktria. Tradition tells us how at the early dawn of human history Aryan tribes migrated across the Himalaya and Hindoo Kush, following the valley of the great river; and settled in the fertile lands of north-western India, bringing with them their language and cult, which subsequently became paramount and in greater or lesser purity extended over the entire of the Peninsula. The traditions of the Iranians afford us a clue as to the impelling cause of the movement, which will account for many of the observed facts in the early history of the Aryans. In the *Zamyad Yasht* the Zend-Avesta describes the earthly paradise of Yima Kshaetra, where none of the evils ordinarily incident to mankind were to be found. It was not however to last, for Yima forgot his duties and the Azhi Dahâka chased him from his kingdom and slew him. Tradition never tires of the beauties of Airyana Vaejo; here was no cold, no heat, no old age, no death till Yima's transgression brought all the evils in its train, and winter and its concomitant ills of cold, snow and frost came to render uninhabitable the once happy land. Nor was the change of climate the only evil that befel it; along with the cruel winter came the still more ruthless invader the tyrant Zohak, as the *Shahnameh* calls him, who after the death of Yima for a thousand years oppressed the inhabitants till in turn Feridun, a descendant of his victim, revenged his blood and locked up the tyrant in a mountain cave in Demâvend. The story amidst a setting of myth retains a genuine tradition. The ancestors of the eastern Aryans dwelt in the heart of central Asia, in a pleasant climate, happy and contented, and increased in number and the arts of civilization. From a cosmical cause, probably connected with the drying up of the old central seas, we know from other sources that the climate of the entire of central Asia has since the beginning of history, and probably for many ages before, been undergoing a gradual desiccation. Chinese tradition is here at one with Iranian and both are borne out

by the existence in the howling desert of ruins of once opulent cities. Not only did the deterioration of climate affect the districts inhabited by the Aryans, but it compelled the northern Turkish tribes, once dwellers in the vast plains north of the Altai, to break up their habitations and pour down on the Aryan settlers, pushing them east, west and south. One branch, as we have seen, crossed the Himalaya and Hindoo Kush, carrying into India the benefits of civilisation. Chinese tradition stored up in the *Shi king* and the pages of *Mencius* concerns itself with the fortunes of yet another branch. At a period of some seventeen centuries B.C. we find the ancestors of those Chow tribes, who afterwards established the first empire in China, laboriously moving east under the guidance of a leader called [*Shi*, III. 2. VI] Kung liu, *i.e.* Kere daspa, and taking up their abode in Pin, in old Chinese Fan or Van. Whence they came or why they broke up their former homes tradition tells us not. How long they remained there we know not, but the end came at last. *Mencius* [I, Part II. chap. XV.] tells us how the Tik, *i.e.* Turkish, barbarians came down on the rising settlement. The inhabitants offered them tribute of furs, but they would not desist; they gave them dogs and horses, but to no effect; they offered cornelians and jade, but in vain. Their king, 太 Tai, called his elders together and told them, "What these Tiks want in our territory; to save you I will leave." He withdrew with a large portion of the tribe, crossed the Liang shan, and took up his quarters at the foot of Mount K'i, now the T'ien shan. Other fragments enable us to identify the road taken as that subsequently traversed by MARCO POLO, by CHARCHEN and LAKE LOB. At the former the *Shi king* [III, 1. VII.] describes a battle the remembrance of which lived long, for Tsin many hundreds of years afterward still preserved the captured drums and coats of armour. At K'i the fugitives had a temporary rest; they cut down the forests and underwood which at that time occupied the land,

opened out roads and erected dwellings by the sides of the streams [*Shi king*, III, 1. III.] How long they remained we are not told, but the next we hear of them, under pressure still, they are attacking the north-west of China. The myth of T'ang is repeated. Chow sin, the last of Yin-Shang, is defeated by the brothers Chow kung and Wan wang, and the dynasty of Chow settles in Shensi, whence, like its congeners in north-western India, it was destined to spread its cult, and partly its language over what one day was to be the Empire of China. More completely, because in smaller number, the race lost its characteristics, being absorbed in the mass of aboriginal tribes; and more completely in the process of assimilation the language lost its external signs and dwindled by degrees into the modern monosyllabic speech of China. So completely did the intrusive races cut off the connection of the new settlers from their ancient compatriots that the very name they loved to call themselves by—the "Aryan men"—became in the degraded dialect of the new state 黎民 Li-min, and in the course of time, when the blood of the settlers had died out, was interpreted by the race which had absorbed them as meaning the "black-haired people." The twenty-eight lunar stations of the Chinese are thus directly derived from the time when the ancestors of the Vedic Indians, the Chows and the Iranians, lived in close proximity to the site of the Airyano Vaejo, and from what we shall be able to discover below it will be evident that the connexion between the Chows and the Indian stem was closer than that between them and the Iranic branch. This approximation is evident in the changes of consonants and vowels. Modern Chinese, though it has cast off all inflexions, and for the most part resolved all dissyllabic words into monosyllables, preserves in many cases the halves of the divided word which it has converted into synonyms, but which in the spoken language are generally found combined to convey intelligibly the meaning to the ear. Initial

consonants, when tenues, are generally preserved unchanged, dentals, palatals, and latials being however largely confused; mediæ are transferred to the lower tone series, and in the majority of cases change into the corresponding explosive or rather ultra-surd. *R* initial becomes *l* or *ng*, *r* final *ng* or *n*, or sometimes having first become *l* is dropped after lengthening the syllable. Velar sounds are preserved or change into *ū*, and the sibilated gutteral *ç* generally remains *k* but sometimes becomes *sh*. Final consonants in the older dialects remain, being generally represented by the tenuis of their class. Notwithstanding the extreme variation to which the language has submitted, these changes will be found to prevail with great regularity in the older dialects, Cantonese especially, which may be adopted as the key.

WEBER concludes that the Chinese asterisms must be of late introduction, not earlier than the second or third century B.C., from the fact that the list as usually presented begins with Spica. The series itself however presents evident traces of an older origin, though the literature on the subject does not extend beyond the Han dynasty. The Chinese never took kindly to the solar zodiac, and most of their astronomy suffers from a grand misunderstanding: by some extraordinary error in the introduction of the zodiac they have contrived to reverse the constellations so that the constellations said to represent the months actually go backwards. Thus while 酉 *yu* (*yau*) is made correctly to correspond with Taurus, its successor 戌 *sü* (*sūt*) goes backward to Aries, the two series again crossing at 卯 *mâo* in Scorpio. These discrepancies are however numerous and mark plainly how little original there is in Chinese astronomy.

As usually displayed by the Chinese then the circle of the zodiac is divided into twenty-eight parts, marking roughly the daily advance of the moon through the stars. From the nature of the case the correspondence cannot be very accurate,

but still was sufficiently close to strike the early inhabitants of mid-Asia. They also noticed that the position of the full moon amongst the stars varied from month to month and season to season; and hence before accurate observations were made of the path of the sun, the moon answered not only as a divider of months but also as an indicator of years. Such was the state of astronomy when the eastern Aryans, confining the latter term to the Indo-Iranians and their congenors, were dispossessed of their original home by the intrusive Turkish tribes from the Trans-Altai. The following table shows its connection with the Persian system :—

Equivalent Months.	Old Persian (*Bundahesh*).	Parsi (*Le Normant*).	Chinese 12 Stems.	Equi. Phon. in Old Language.	Equivalent Signs.	
					By Chinese.	Correctly.
March	Fravar*d*in	Farvardin	酉 yau	ûr	Taurus	Taurus
April	Ardavahi*s*t	Ardibihisht	戌 sut	ard	Aries	Gemini
May	Horvada*d*	Khordâd	亥 hai	ghur	Pisces	Cancer
June	Tîr	Tîr	子 tsze	tar	Aquarius	Leo
July	Amerôda*d*	Murdâd	丑 ch'au	dhvar	Capricornus	Virgo
August	Shatvairô	Shahrêvar	寅 yan	vir	Sagittarius	Libra
September	Mitrô	Mihr	卯 mau	mar	Scorpio	Scorpio
October	Âvân	Abân	辰 shan	? çar	Libra	Sagittarius
November	Âtarô	Adar	巳 sze	dar	Virgo	Capricornus
December	Dîn	Dai	午 wu	? dhwa	Leo	Aquarius
January	Vohûman	Bahman	未 wi	? vat	Cancer	Pisces
February	Spendarmad	Shpandarmâd	申 shan	sfar	Gemini	Aries

The Asterisms.

The new year beginning at the vernal equinox was naturally then represented, not as in later times by the Pleiades but by the stars in the forefront of Scorpio, the 房 (Fang) of the Chinese, the "Chamber" or, as we shall see later on, the *Carcer*, called also the *Ho* (Fire) or *Ta ho* (Grand Fire), a name transmitted from an earlier time when it referred to Antares.

As the leader of the old asterisms Fang is, according to the Rev. Dr. CHALMERS, occasionally used instead of the more frequent 舍 *she* or 宿 *suk* to denote as a general term the individual asterisms. *Fang* being thus the representative of the meaning, as *she* of the sound of the Sanscrit Kshayas (a habitation, halting-place). The name 火, the fire star, more properly belonged to Antares and is a survival of the still earlier period, of which we shall find occasional traces, when the annual return of the equinoxes was marked by the full moon in conjunction with Aldebaran and Antares respectively.

Scorpio is still further connected with the calendaric branch 卯 *mao*, which in turn represents the Parsi Mihr, a corruption of old Persian Mithra, the equivalent of the month of September, when the sun crossed the equator at the autumnal equinox. The Sanscrit name Anurâdhâ (the Completed), corrupted in the *Bundahesh* to Nur, points to its position as finisher of the year, and recalls the time when Antares marked the equinox. Its deity in the ancient Hindoo mythology was appropriately Mitra, the representative of the more important old Persian Mithra, who ruled the day as Varuna did the night. The Arab *Manzil* al Iklîl (the Crown) apparently indicates the importance of the group.

The second *suk*, the fifth on the ordinary list, is generally known as 心 *sam* (the Heart), which recalls the corresponding Arab *Manzil* al Kalb, of like meaning. The name is probably of comparatively modern introduction and refers to the 青龍 *Ts'ing Lung* (the Blue Dragon) of the quadripartite division of the zodiac, of which it forms a fair centre. The more ancient name, as we have seen, was 火 Ho, or Ho-sing (the Fire Star), referring to the ruddy Antares, the chief of the group. The Indians called the asterism Jyeshthâ (the Eldest Born), indicating its position as the original head of the series. The Nakshatra is represented as a pendent ear-jewel, which the three stars Alpha, Sigma and Tau Scorpionis, of which

it is composed, may be fancied to resemble. The Chinese also call it 轄 Hiah (hat), the "Linchpin," but the phonetic element is probably similar to that in the Indian name Jyesh*th*. In the *Bundahesh* it is Gêl, possibly connected with the same root as Jyeshta.

No. 3 (sixth in the usual roll) is 尾 Wei (the Tail). The use of the term may be explained in more modern star lore as forming the tail of the Ts'ing lung (the Azure Dragon). In the Indian system it becomes Mula (the Root), the explanation of which is difficult; Mula and Wei (in Cantonese Mi) both however mean *the end*, *extremity*, and are probably phonetically connected. It has been suggested by BURGESS (*Surya Siddhanta*) that the name Mula (the Root) was given from the position of the group near the southern horizon at its culmination. At B.C. 2000 the lowest point was only 28° south of the equator, so that the idea could hardly have originated south of 50° North Latitude. The asterism in India bore the alternative name of Vich*r*ítâu (*the separators* or *spreaders*, as of two branches bifurcating from a single root).

The *Bundahesh* calls the group Garafsa, apparently connected with gareva (womb), from root garev (to hold, take hold of). If the idea were that the year was born out of this station, it would carry the origin of the name and of the lunar zodiac to a date anterior to 4000 B.C., regarding which it is interesting to compare the notes on Chinese 胃 *wei*, No. 14.

No. 4 (seventh in the ordinary list) is 箕 Ki (the Winnowing Tray), an asterism which has left its impress on the legends of the east from Persia to China. In the story of the extinction of Yin and the triumph of the Chows, it appears as 箕子, which we may translate as "Viscount" Ki, though usually the suffix 子 *tsze*, like Sanscrit *tar*, represents the *doer*. Ki was in attendance at court till in the waning days of Yin the tyrant Chow-sin put him in prison; and one of the first acts of the rising house of Chow was to release him and restore his

patrimony. The myth is transparent: at the approach of the autumnal equinox B.C. 1200 the constellation of the Winnowing Tray faded away in the evening twilight. One of the first marks of the approaching solstice was its reappearance in the glow of the morning as the sun passed on through the stellar zodiac. This latter portion of the tale found another expression: Ki, according to the authorities, when he saw the extinction of Yin inevitable, fled away. When the Chows came to the throne, they sought him and found him in the land of the Saffron dawn 朝鮮 Châosien, *i.e.* Korea. Ki disdained to take service under another sovereign, and founded the line of Korean Kings. At the recension of the early books in the time of the Han dynasty the astronomical origin of the myth was not quite forgotten; so the commentators tell us [LEGGE's *Chinese Classics*, III. 278] that Ki's name was 胥餘 Sü yü, *i.e.* (A)Shadha, explained below.

The Winnowing Tray, Sanscrit çûrpa in Zend çufra, was one of the instruments given by Ahura Mazda to Yima in Airyana Vaêjô in token of royal sovereignty. The second Fargard of the *Vendidad* tells us how Yima went forth to the stars of the south. He touched the earth with the golden çufra and pierced it with the gold tipped goad, and prayed "Extend O bounteous Armaiti, enlarge and spread O bearer of cattle and oxen and men [*see* HAUG's *Essays on the Parsis*]. So in Indian lore Çurva-nakha (having nails like a winnowing tray) takes a prominent part in the story of the war between Râma and Râvana.

By the Hindoos the asterism corresponding to Ki included also the next, Tau, divided however into two, Pûrva (hither) and Uttara (further) "Ashâdhâ." Ashâdhâ is said to mean unconquered, which is more than doubtful; it is more probably connected with root çi (to sleep), and means "a seat or place of abode." The Hindoos accordingly represented the two asterisms as a bed, but also as two elephants' tusks. The

Bundahesh calls the corresponding group Vara*nt*, while the Arab *Manzil* is an Na'âim (the pasturing cattle). The latter might have an allusion to the time when the full moon in the bow of Saggitarius marked the season for the cattle to descend from the mountains to the plains of mid-Asia. The name Vara*nt* may possibly be connected with Zend vouruvâthwa (having broad herds) [*Yasht*, 13. 130].

No. 5, eighth on the ordinary list, is 斗 *Tau* (the Ladle), still known in Europe as the Milk Dipper. The name in Chinese is common to this group and the seven stars of Ursa Major, both approaching in form the ordinary ladle or dipper of the Chinese peasant, the stars being μ, λ, ρ, σ, τ, and ζ, in the shoulder and bow of Sagittarius. The word *tau*, corresponding to Greek τορύνη, in Latin *trua* or *trulla*, is one which has spread from the Atlantic to the Pacific. The division of the asterism was probably not original, and hence some confusion between the titles of the station. The Arabs place their *Manzil* in the head of Sagittarius, and call it al Baldah (the Town), while the corresponding group in the *Bundahesh* is Gâu (the Ox). For some forty-five degrees in Capricornus and Aquarius the zodiac is unmarked by any conspicuous star group, and a considerable amount of uncertainty prevailed as to the position of the Mansions, and the original namers of the asterisms seem to have gone far afield for suitable objects.

Probably for these reasons the Indians adopted as their Nakshatra the distant Vega in Lyra, 2000 B.C., rather more than forty degrees north of the equator and some sixty off the ecliptic. To the constellation Lyra the Chinese gave the name of the Chih-nü (or Weaving Women), a name still familiar and associated with the legend that once a year on the seventh day of the seventh moon Altair crosses the celestial river (the Milky Way) to visit Vega. In the *Shi king* [III. 1. III] the myth of Wan Wang shows clear traces of its

astronomical origin, and here we find an allusion to another version of the story. The ballad tells us [verse 5]:

不 造 親 文 倪 大
顯 舟 迎 定 天 邦
其 爲 于 厥 之 有
光 梁 渭 祥 妹 子

In yon wide realm a lady lies,
Of Indra's[1] home the richest prize.
Propitious be the omens then,
As by the Wei[2] he meets his bride!
His skiff he steers athwart the tide,
Too dazzling bright for mortal ken.

The 天船 (Celestial Ship) still waits in the Milky Way (ν & η of Perseus) to ferry over the fair bride. The Indians gave the name of Abhijit (conquering), a name of apparently late introduction, to Vega and its companions.

No. 6, or nine in common account, is the 牛 *Niu* (the Ox). Although the name here is ancient, the group selected by the Chinese seems of comparatively late introduction and consists of the inconspicuous stars above the head of Capricornus. In India the Nakshatra is Çravana and is identified with the first magnitude star Altair and its companions in Aquila. In the *Bundahesh* the corresponding asterism is Goî, which latter in connection with the last (Gâu, the Ox) may be looked upon as a corruption of Zend Gaoya (the Ox leader). It almost certainly represents Altair, and this star or group of stars in Chinese is still known as 牽牛 *K'ien-niu* (the Ox leader), in Cantonese *Hin-ngau*. The same idea prevails in ancient Greek lore where χείρων is the most eminent of the Centaurs, the friend of Hercules, by whom he was accidentally killed, but was subsequently by Zeus himself placed amongst the stars. But Kentaurus (the Ox leader) also in former

[1] In-t'ien, the visible heaven, the abode of Indra.
[2] Wei here is the celestial river, the Milky Way.

times included the Eagle, and Cheiron was apparently the star known to us as Altair. Cheir-ôn and the Chinese *K'ien* (in older form *Hîn*) are both variants of the root *ghar* (to take, lead), and the idea is symbolised in the myth which makes Cheiron educator of the principal heroes. In ancient times, when the sun crossed the equator in the Pleiades, Altair was seen high in the firmanent as the watchers looked for the vernal equinox, and was the last star to fade in the light of the rising sun. Even so late as the time of Euripides we find the chorus in Rhêsos singing:—

> "What watcher succeeds to my vigil?
> Already the bright stars are sinking
> And the seven-rayed Pleiads peep o'er the horizon;
> In the Zenith aloft soars the Eagle;
> Awake! Why delay? From your couches
> Arise, and prepare for the vigil."

The Indian Çravana or Çroni, by which the constellation was known, is said to be derived from the root çru (to hear), and the constellation is supposed to represent an ear. More correctly it is a softened form from hṛi (to seize, draw), and identical in its meaning with the others. The Arab *Manzil* al Bula (the Devourer) bears no philological connexion with the others.

No. 7 (10) is by the Chinese placed in an inconspicuous cluster in the forepart of Aquarius just over the back of Capricorn. This is however not its original position, which was in the better defined group of the Dolphin. By them it was known as 女 *Nü* (the Women or the Girl), the allusion not being very clear. SCHLEGEL suggests it was intended to mark the time when the labours of the field being over domestic work fell to the women of the family, but this would not tally with the fact that originally the full moon occurred in Nü prior to the summer solstice. The Indians called their more clearly defined station Çravish*tha* or Dhanish*tha*, said to be irregular superlatives meaning "most famous" or "richest,"

but why they should have adopted these names is not attempted to be explained. Dhanish*tha* may probably be derived from from dhanu-s (a bow) rather than from dhan-am (wealth). The *Bundahesh* at all events names the corresponding station Muru (a bird), in Zend meregha, from a root marg or varg (to hunt), to which root may possibly be referred the Chinese name of the Dolphin (匏 *P'ao* or 壺 *Hu*) with a meaning altered to Gourd. The Dolphin has always in ancient as well as modern times been associated with hunting.

No. 8 (11) in the Chinese is 虛 *Hü*, which may be translated as the Waste or Desert. The original meaning is to *leave*, *relinquish*, and is applied to the vacant space adjoining β Aquarius. This corresponds with the Arabic Sa'd as-Su'ud (Felicity of Felicities). The original constellation of Said (Felicity) must have included the greater part of Aquarius and Capricornus, extending from *alpha* Capricorni, Sa'd adh Dhabih, to *eta* Aquarius, Sa'd al Akhbiyah. The name is curious and probably was given as the space wherein was situated the station of the full moon at the summer solstice at various periods from 2500 B.C. to the Christian era. No corresponding asterism occurs in the Indian series, but the Arab and Chinese names throw considerable light on the nearest Indian Nakshatra explained below. The *Bundahesh* calls the asterism in order here Bunda, with which we may compare Zend buna (ground, basis), Sanscrit budhna. The same root reappearing in Latin *fundus*, Greek βυθμός, βυσσός, old Norse botn (bottom). About 1600 B.C. the full moon here attained the lowest portion of her course marking the summer solstice, which circumstance has evidently afforded the old Persian name, and affords a reason too for the placing here of the Chinese *suk*.

With that curious absence of original observation and the entire want of the faculty of verification which essentially characterises the Chinese as a race, the *Hü* is in the *Shu king*

connected with the autumnal equinox. The circuit of the heavens is divided into four, marked respectively by the stars Alphard, Antares, Sadulsund and the Pleiades. About 2350 B.C. the longitudes of these stars were respectively (approximately) 85°.30′, 189°.30′, 263°.30′ and 0. No very close approximation, and evidently blundered from an earlier tradition when Aldebaran and the Hyades marked the equinoctial colure. The star ninety degrees from the colure was supposed to mark not only the equinoxes, which roughly it might do, but the solstices, which it certainly could not do, by crossing the meridian at those periods at sunset. Thus the *Shu king* [I. 6] in its mixture of old rhythm and modern gloss tells us—

以 宵 平 寅 宅 分
殷 中 秩 餞 西 命
仲 星 酉 納 昧 和
秋 虛 成 日 谷 仲
毡 毛 獸 鳥 夷 民 厥

He commanded Ho chung
To take his station on the west in the obscure valley
Reverently to make offerings to the Sun;
To pacify and arrange the entire of the west.
In the midst of the empyrean was the star Hü
By which to determine mid-autumn.

The gloss mistaking the allusion adds, "The people rest, the birds and beasts renew their coats."

No. 9 (12) in the Chinese is 危 *Wei* (danger, peril). Hither *circiter* 2350 B.C. wandered the full moon at the summer solstice. What was the idea of danger we may see exemplified in the legend of T'ai K'ang in the *Shu king* quoted above [p. 46]. Chinese *Wei* however comes from the same primitive root as Sanscrit *bhî* (to fear), and this offers an explanation of the corresponding Indian Nakshatra Çatabhishaj or Çatabhishâ. This is usually taken to mean the Hundred Physicians, or Remedies, from an assumed verbal root bhishaj (to heal). More

naturally the word is derived or corrupted from Çatabhîshâ (the Hundred Dangers). The "danger" referred to probably indicating that the path of the ecliptic might not return. From a comparison with the Arabic name Sa'd al Akhbiyah, (the felicity of tents), taken in connection with the fact mentioned above that the chief stars in this region all bear the name Sa'd (felicity), even to the present day the names Sadalmelik and Sadalsund for *alpha* and *beta* Aquarii remaining on our celestial charts, we might presume an Aryan form Çatabhajat or Çatabhajinî (the hundred felicities). If so, the original appellation doubtless came from an allied root bhuj (to bend, curve), corrupted when the name ceased to have meaning as the bending place of the sun or moon's path, into bhishâ, bhîshâ, bhajat, or wei, or, translated, into Arabic Sa'd (felicity). The *Bundahesh* places here the asterism Kahtsar, which possibly may represent Zend Çatazareta (the Hundred Oppressions) or Çatazarâ (Hundred Pains).

The ancient importance of the Asterism is shown by its having in Indian lore been placed under the special regency of Varuna, the old supreme deity of the Aryas. As Varuna is associated with the waters of heaven, so the mansion is in modern astronomy placed in Aquarius comprising the stars α, ν, ζ & η.

Nos. 10 and 11 (13 and 14) in Chinese 室 *Shat* and 壁 *Pik* respectively, the Indian Purva and Uttara (former and latter) Bhâdrapadâ, representing the well marked quadrilateral in Pegasus. The Chinese name of the first, Shat (the house) must originally have included both asterisms, as in Indian lore did Bhadrapadâ (happy foot). Dividing the two, the second part became Pik (the wall or partition). The *Bundahesh* gives for the former Vaht, possibly a corruption of the Indian name, and for the second Miyân, Zend Maidhyâna (the middle). The asterism is also known to the Indians as Prosh*tha*padâ, which we are asked to accept as "carp foot" or "ox foot,"

a rendering hardly exceeded in absurdity by the Chinese. Proshtha, we may however derive from prush (to rain *or* to burn) and render the word "rainy foot" or "rainy pace," and this will throw light on the Arabic *Manzils* al Fargh al Mukdim and al Fargh al Mukhir (the two spouts of the water jar), the full moon passing in early times the constellation during the Indian rainy reason.

Fargh and Chinese Pik, the latter formerly in the lower tone, are apparently phonetically connected, and the Indian name *may* be a corruption of Bhâgapadâ from bhaj (to divide, apportion), which gives to Bhâga a secondary meaning of "good fortune." If the original idea was of dividing, we can account for the Chinese Pik of similar meaning, as well as for the Persian Miyân (the middle), but the division of the Lunar Zodiac by the full moon at the summer solstice in the constellation cannot have taken place later than about 3500 B.C.

On the whole I am disposed to look for some original form such as Bhârgavâ from bhrajj (to scorch) and to connect it with the Indian myth of Brigu. The Persian (*Bundahesh*) Vaht, Indian Bhâdrapadâ, Chinese Pik and Arab Fargh have thus a common phonetic origin.

No. 12 (15) in Chinese 奎 *Kwai* (the stride). In the Indian system the Nakshatra is Revatî (abundant, wealthy) from root râ (to give), the full moon in the constellation marking anciently the beginning of harvest. The Chinese name is connected with the root varg (to go), whence our "walk," and the form Revatî may be connected with rinv (to go, follow). The Parsi form in the *Bundahesh* is Kaht, probably connected with root kah, Sanscrit kas (to go), and the Arabic is Batn al Hüt (the belly of the fish), where Hüt represents the constellation Pisces (the fishes), in Greek Ἰχθύες, Ἰχθύς is not improbably connected again with ἴχνος (a footstep) from root viç (vik) to enter, approach, and Hüt and Kaht if not etymoloyically are certainly phonetically connected as well as Chinese Kwai,

We may thus follow the modern constellation of the Fishes to an older form meaning the "step" or "stride," from the conspicuous Quadrilateral of Pegasus to the well marked stars Alpha and Beta in the head of Aries forming the next stopping-place.

No. 13 (16) 婁 *Lou* (the stage, terrace). We have now arrived at a region of the heavens which has ever been the theme of the poet and the mythologist, and which has left an indelible mark on our fancies and our arts. The Pleiades and Hyades, the mighty hunter Orion, the two Dogs with the star Sirius, almost a sun himself as he shines in the vernal sky, the Dioscuri with their quaint legends, not to speak of the Ship Argo and the other wonders of the southern sky, have formed the foundation of much of the romantic literature of the nations of the antique would. Even to the present day in the world of art their influence survives, while our folk-lore is full of legends of the young vernal sun and the constellations he meets with in his passage through the zodiac. The two stars Alpha and Beta of the Ram form a not inapt portal into the fairy land, and with them astronomy, poetry and myth begin to blend. The Chinese name *Lou* (a raised stage) has little in its external appearance of the poetic, yet it has lent itself to one of the prettiest legends of the dawn-land. We find in the Indian scheme these stars called the Açvinâu, the Twin Horsemen, the harbingers of Ushas, the dawn, "the earliest bringers of light in the morning sky, who in their chariot hasten onwards before the dawn and prepare the way for her."

When at the first beginnings of astronomy the sun was in conjunction with the Pleiades at the vernal equinox the heliacal rising of the constellation was anxiously looked for as the token of the opening year. The stars then seem, in India at all events, to have been called the Daçvins (the Peepers), from the root daç or dam̃ç (to shine). In Chinese the phonetic

婁 *lou* almost certainly had an initial *d*; we see this in the corresponding phonetic 劉 (now *liu*) which respresents also a root damç, the Greek δάκνω (to tear or rend). In its form 樓 *lou* (a story, a stage), the word is identical with 臺 *t'ai*. 婁 then *lou* equally with the Indian word meant the Peepers, which in the earliest dawn ushered in the glad new year. When the equinox travelled backwards from Taurus to Aries, the stars lost their significance as the forerunners of the year and Daçvinâu (the Peepers) grew into Açvinâu (the horsemen or vedettes). Similarly in the Arabian calendar the stars were called ash Sharatân (the Tokens), a name which finds its signification in the fact that there also they were the token of the arrival of the glad new year.

In the *Shi king*, [II. 4. 11] we find under the heading of the 白駒 *Pak k'ü* (the Yoke of White Horses) a hymn which compared with the Greek myth of Eos and Tithonos is worthy of record. The allusion is apparently to these two stars.

SPRING SONG.

Ode to the "Vedettes."

Shine on, ye glowing steeds of day,
Our meadows wide with light suffuse:
Halt in your course; your progress stay;
This morning's dawn to close refuse.
My cherished love, all care aside,
May one long day with me abide.

Shine on, ye glowing steeds of day,
O'er our wide fields your radiance send:
Halt in your course; your progress stay;
This night beyond all nights extend,
My cherished love, oh happy bride!
May one long day with me abide.

Shine on, ye glowing steeds of morn,
While burning thoughts my bosom fill,—
What though of noblest lineage born,
In modest ease for aye be still:
For aye forget your aimless quest;
Your anxious thoughts be lulled to rest.

Shine on, ye glowing steeds of day,
O'er yon wide valley stay your light,
There in a patch with verdure gay
My loved one lies, a jewel bright;
Nor covets gems nor golden showers,
While happy hearts beguile the hours.

[Shi, II. iv. 2.]

The Parsi Padêvar we may refer to Zend Paitidaya (the Outlooker, Peeper), from the stem dî (to see) equivalent of Sanscrit dî (to shine) and allied to damç, above.

No. 14 (17) 胃 *Wei* (the belly, stomach). In Indian lore Bharanî (the bearer) *i.e.* the *Vulva*, *Muliebre pudendum*; the Arab al Butain (the little belly). The allusion in all three is plainly to the approaching birth in the Pleiades of the new year's sun. It may be noticed here that already the solar phenomena were superseding the lunar with regard to those asterisms from 13 (婁 *Lou*) onwards. We can therefore fix approximately the age of the names at about 2100–2300 B.C.

The name in the *Bundahesh* is Pêsh Parvîz (the Attendant Pleiad) from root piç (to tie, bind).

No. 15 (18) 昴 *Mao* (to burst forth, flourish); the Pleiades. From the earliest times the Pleiades have been celebrated in mythology and folk-lore. In the book of Job [xxxviii. 31] we find the question asked "Canst thou bind the sweet influences of the Pleiades or loose the bands of Orion?" where Kimah or the "Seven Stars" is the name applied to the asterism. In the year 690 B.C. we have in the *Ch'un ts'iu* a curious allusion to the Perseid meteors. "In summer in the 4th moon the stars fell like rain." Apparently referring to this the *Shi king* [I. ii. 9] sings:—

"With brilliant trains the meteors fly
Orion and the Pleiads by;
They pass away with hissing sound.
Our quilts around our heads we bend
Vainly the omen to forfend."

In the Indian system the Pleiades are known as Kṛittikâ, from the root kart (to cut), the meaning being that they are placed at the division point of the heavens, the name having been given when the sun in Pleiades marked the beginning of the year at the vernal equinox 2350 B.C. A Greek legend makes them to have been placed in the sky at the death of their sisters the Hyades, which possibly refers to a yet older time, *cir.* 3000 B.C., when the equinox ceased to be marked by the latter. The Arabs, under the name of ath Thoraiyâ (the Cluster), seem to have preserved a recollection of the Greek Taurus, the name of the *Sign* in which they were included under the subsequent solar zodiac; they also called the group au-Najm (the Constellation) from its commanding position as the head of the asterisms. The name in the *Bundahesh* Parviz, in modern Persian Pervîn, has not been explained, but it, Greek Pleiades and Chinese Mao, are probably connected with the Sanscrit root vṛimh (to increase), to which also is to be referred the Latin *Vergiliæ* (connected with virga, a sprout), the Latin form being apparently the nearest to the original. The name evidently had its origin in the temperate zone where the bursting forth of nature at the vernal equinox is most marked, and so we can account for the loss of it in India and Arabia, where the names were derived simply from the beginning of the year.

No. 16 (in the usual notation No 19) is in Chinese 畢 *Pat* (*Pih*) and corresponds with the Hyades. In the *Shi king* the asterism is called the 天畢 *Tʻien pih*, which may be translated as the Celestial Finishers (*i.e.* of the year) in allusion to the fact that the Hyades were the last stars to disappear in the western horizon at the approaching new year. The *Shi king* [II. v. 9] sings:—

有 捄 天 畢
載 施 之 行

which may be probably translated:—

> Sinks (in the west) the T'ien pih
> As the year completes its circuit.

From the shape of the asterism the Chinese explain it as the Fowler's Net. *Shi* [II. VII. 2] sings again in a spring song:—

> "The teal are ready to flit
> The Pih is spread out as a net."

None of the asterisms have suffered so much verbal corruption as the Hyades, and the Persian term Paha as given in the *Bundahesh* is the only one recalling the Chinese *Pat*. The Indian name is Rohinî (the Ruddy), alluding to the colour of its principal star, while the Arabs have called it ad Dabarân (the Follower), *i.e.* of the chief asterism, the Pleiades. The Latin name is Suculæ (the sow's litter) identical with the Greek Ὑάδες, a patronymic from ὗς rather than a derivative from ὕω. The origin of the name in either case is however unknown, and it may be suggested that the Greek form is possibly a corruption of ὑστέραι, like the Arabic dabarân, meaning the "followers," and the Latin name was a loan word introduced after the original meaning had been forgotten. The connection of the Hyades with rain was early believed in by the Chinese; the *Shi* [II. VIII. 8] tells us that when the moon passes the *Pih* there will be heavy rain, a statement, however, difficult to reconcile with observation.

No. 17 (20) is in Chinese 觜 *Tsze* (the deer's head and antlers), *lamda*, *phi*[1] and *phi*[2] in the head of Orion. This corresponds with the Indian Nakshatra Mṛigaçîras (the deer's head), as well as the *Bundahesh* Avêsar, as if Urvîçara (Wide-head). The Arab al Hak'ah (the Brand) has no apparent connexion with the others either in sound or meaning. In later times the constellation became itself the "Rebel" or the "Hunter." Job [XXXVIII. 31] speaks of loosing the belt of Kesil (the Rebel), and, as we have seen *supra*, T'ai k'ang (the

sun) in returning to the equator found the passage obstructed by I 羿, the prince of the Empyrean, who dethroned him and whose Cantonese form (Ngai) suggests a root ending in *r*, probably *vor* and so the equivalent of Greek Orion as if connected with οὖ-ρος (a watcher, guard). I, as we have have seen, pointed his bow at the Pleiades, and so Orion forces his way into the chamber of Merope, and in consequence is condemned to lose his sight, only restored when long after the vernal equinox he is seen rising in the east to court the glare of the rising sun.

No. 18 (21) is in Chinese 參 *T'sam*, which we may compare with 滲 *sham* (shan) to "overflow, submerge." It consists, according to the Chinese, of Betelgeux, Rigel and the stars in the belt and shoulders of Orion. The corresponding Indian Nakshatra is Ârdrâ (moist), and is said by BURGESS (*Sûrya-Siddhânta*) to represent only the star Betelgeux; the *Bundahesh* calls the corresponding constellation Besn, perhaps Zend Barezanh (a summit), but more likely corresponding to Bâzn, arm, *i.e.* Betelgeux. Practically there is no difference in right ascension between Tsze and Tsam, the latter overlapping the former both east and west, and it is very characteristic of the little progress made towards correct definition that the two stations should have continued in popular tradition in countries so far parted as Persia and China.

With a slight attempt at discriminating their fifth and sixth *Manzils* the Arabs have placed the latter in the feet of Gemini, and have given it the name of al Han'ah (the Pile), the application of which is not however very plain. In so doing they have encroached on the next Chinese *suk*.

Both Indian and Chinese names seem to have an allusion to the prevalence of the spring rains when the sun is in conjunction with Orion, as by the Romans the latter was also denominated Aquosus (watery).

No. 19 (22) is in Chinese 井 *Tsing* (the Well) and consists of the stars in the knees and feet of Gemini. Tsing (a well)

takes its name rather from the fact of its being dug out, as may be seen in the form 穽 *tsing* (a pitfall), than from the welling of the water, and I should therefore be disposed to look upon the name as modern and derived from the grouping of the stars ε, ζ, λ, μ, ν, γ, ξ, Genimorum, which may have recalled the character 井. It thus in part occupies the place of the last Arabic *Manzil*.

The corresponding *Nakshatra* Punarvasû, more naturally is marked by the two conspicuous stars Castor and Pollux, to which in Greek lore have been transferred the attributes of the Açvinâu (No. 13). The name Punarvasû (Repeated Riches) is evidently a corruption of an earlier form, perhaps Punarvarsha (Returning Rains), which may be possibly compared with the *Bundahesh* Rakhvad, if the latter be referred to Zend Rakhçvaidhi (Excessive Water). The corresponding *Manzil* adh Dhirâ (the Paw) is said on the authority of IDELER to refer to the constellation of the Lion, made by the Arabs to include parts of Cancer and even Gemini.

In this asterism we distinctly recur to the older Lunar terminology, suspended in the previous six groups owing to the movements of the sun at the vernal equinox having in early times become of more importance than the lunar phenomena.

No. 20 (23) is the Chinese 鬼 *Kwei*, a name of ill omen applied to the manes of the departed, used generally in the Confucian books in antithesis to 神 *Shen* (celestial beings). Etymologically the name is connected with Sanscrit *vrittas*, *qui vixit*, hence the dead, and represent a root vart (K)wart (to turn). The name had perhaps better be written 瑰 *kwei* (a jewel), and corresponds with the cluster called by the Greeks φάτνα (the Manger) the Latin Præsepe. Possibly an older name was Vartnî (the Crib), from which the Greek and Chinese names, as if the former were for φάρτναι (the Returners)

with which compare note on No. 9 危 *Wei*. The solstitial colure passing the asterism about 900 B.C. This latter fact, as in the somewhat similar case of 危 *Wei*, accounts for the meaningless names applied to the Indian Nakshatra Pushya (nourishing), Tshya (auspicious) or Sidhya (prosperous). As in the last station the Arab name el Nathrah (the Nose-gap) implies a former greater extension of the constellation Leo.

The corresponding station named in the *Bundahesh* is Taraha, regarding the position and meaning of which I can offer no explanation.

No. 21 (24) is in Chinese 柳 *Liu* (the Willow) the five stars in the head of Hydra marked η, σ, δ, ε, ρ, forming a circular cluster, as a garland, whence its name 柳 *liu* (the willow) is but another form of 留 *liu* (to bind), and agrees perfectly with the Indian name for the same group of Âçleshâs (the entwiner, embracer), from the similar root çlish (to embrace, join). The name of the corresponding group in the *Bundahesh* is Avra (the Cloud), literally the Water-bringer. The difference in *longitude* between this and the last group *kwei* hardly amounts to five degrees. About 2390 B.C. the difference in right ascension was much greater but gradually decreased, and for this reason possibly the Arabs invented a new *Manzil* composed of ζ Cancri and λ Leonis, which they named at *T*arf (the Lion's Glance).

No. 22 (25) in Chinese 星 *sing* (the star) consists of Alpha Hydra and is usually grouped with the few small stars in its immediate neighbourhood. It is one of the seasonal stars mentioned in the *Yao-tien* [*Shu*, I. 4] where it is called 鳥 (the Bird. The solitary dignity of the star and its position as marking the winter solstice by its conjunction with the full moon doubtless led in Chinese to its being known simply as "the star," a similar reason influencing its Arabic name of al Fard (the Solitary), a name still retained in our celestial charts.

The corresponding Nakshatra in the Indian system is Maghâ (the Mighty), consisting of Regulus and the other stars in Leo, popularly called the Sickle. The *Bundahesh* calls the station Nahn, probably Zend Nâonha, the Nose (of the Lion) as in Arabic it is el Jeb'ha, the Front (*i.e.* of the Lion). The ancient Greeks knew Regulus as Basilikus (the Kingly), as the Arabs called him Malik (the King) from his ruling the solsticial colure.

No. 23 (26) is 張 *Chang*, translated usually as "to draw, extend" (a bow). Here it probably represents the "archer." The stars κ, λ, μ, ν and φ in the last coil of Hydra may perhaps be compared with the bow.

No. 24 (27) is 翼 *Yik* (the Wing, Flank), possibly in connection with the next, the Crossbar. It is composed of the principal stars in Crater.

These two asterisms have no connexion with the corresponding Indian Nakshatra, the Phalgunyas in the tail of Leo. The meaning of the name is not clear. The same stars form the Arab *Manzils* as Zubrah, the Mane (of the Lion) and as Sarfah (the Turning-point). The *Bundahesh* gives Miyân, Zend Maidhyâna (the Middle), and Avdem (unexplained) as the corresponding stations, perhaps both Parsi and Arabian names point to a reminiscence of the ancient position of the solstice twenty-three centuries before Christ.

No. 25 (28) is 軫 *Ch'en* (the Crossbar) of the chariot of which 翼 *Yik* is the flank. We are now rapidly approaching the end, and this perhaps is the reason why these asterisms seemingly represent the different parts of a chariot. *Ch'en* comes from a root meaning "to turn, to twist," whence apparently its application to the crossbar. The Indian name is Hasta (the hand, or the elephant's trunk); possibly the Chinese chariot became converted in India into an elephant, a not unlikely transformation. The Arab *Manzil* steps aside here to the right, including the head and breast of the Virgin

of the modern zodiac; it is called al Auwâ (the Barking Dog), which accompanies the chariot, seemingly corresponding with the Parsi Mâshâha (Zend Mashyôvanha), the domestic animal. The Greek Protrygeter (the Fore-grape-gatherer, ε Virginis) refers to the solar rather than the lunar connexion, the star rising heliacally just before the time for grape gathering.

In this connection 角 *Kioh* (the Horn) No. 26 (1) probably means the Pole of the chariot and points to an earlier use of the term Spica (the Point), afterwards, when the Virgin came to be associated with the autumnal equinox, made the "ear of wheat." In the *Bundahesh* it is Spûr, Zend Çpare-gha (the Point), the Arrowhead spoken of in the Mihr Yasht for the protection of the chariot of Mithra along the heavenly way, the Ecliptic. The Indian Nakshatra is here simply Chitrâ (the Brilliant) while the Arab *Manzil* as Simak is a proper name, probably corrupted from Spica.

No. 27 (2) is 亢 *K'ang* (the Neck, or more probably the Yoke, which in ancient times rested on the neck and to which were attached the breast-straps). The Celestial Chariot was now rapidly approaching the end of its annual journey and was about to reach the goal which we shall find in the next asterism described below. When with the precession of the equinoxes the lunar stations had lost these allegorical meanings, the comparatively insignificant stars of the Yoke were not thought worthy to mark the track of the sun (or moon), and the bright Arcturus was selected to mark the station in later times, called by the Indians Svâti, said to mean "a sword," or rather "the good goer" if from su-at. Apparently however the word is connected with the Husra of the *Bundahesh* in Zend Huçrayanô (well goer).

The Arabs adopted substantially the same stars as the Chinese to mark the *Manzil*, *iota*, *kappa* and *lambda* of the Virgin, which they called al Ghafr, translated as "the Cover,"

a meaningless term, but evidently derived from a form which represented the Latin *Jugum*, Greek ζεῦγμα and Chinese *K'ang*, and pointing here as elsewhere to the nearer approach to the original of the Chinese form.

With No. 28 (3) Ti (the bottom) the long procession closes; but 氐 *ti*, as well as meaning "the foundation" also indicates "to reach," hence the place reached,—"the Goal." Amidst many trials and dangers and past many stations of greater or less importance the chariot of the Year has arrived at its terminus. As in the Roman games it started from 房 *Fang* (the Chamber), the *Carcer* of the circus and now has arrived at the *Meta*. It has crossed the equinoctial river in spite of the adverse darts of the mighty hunter Orion, and now with his arrow pointed at the terminus the archer 張 *C'hang* drives his chariot into the Goal.

The curious coincidences which mark the names of the stations, the resemblances now between Chinese and Indian, again between Chinese and Greek or Arab, and oftentimes between the latter and old Persian, show that neither can lay claim to have been the founders of the system. On the other hand the fact that in all, with the exception of a few Arabic names evidently not original, the roots can be traced to Aryan sources, while the descriptions answer best in the northern temperate zone, point to some spot in Central Asia between Mesopotamia and the Pamîr as the originial home of the inventors.

Notwithstanding the wide extension of the lunar mansions, which at one time must have been popularly received from China on the one hand to Greece on the other, the system cannot have prevailed for many centuries. The nomenclature distinctly points to a period when the equinoctial colure passed through or near the Pleiades at one intersection and at the other through the "Claws" of Scorpio, which would fix the date as near as may be to 2350 B.C. Traces indeed exist of

still earlier nomenclature of the principal groups reaching to about 3000 B.C., when Aldebaran and Antares marked the equinoctial points, but these earlier names do not seem ever to have been worked into a system and exist only sporadically.

If however the completion of the series of lunar stations, and the astronomy to which they gave rise, cannot he dated before 2350 B.C., we find that the system cannot have had more than two centuries of unchallenged existence. Evidence as strong goes to prove that when the astronomers of Chaldea adopted the solar signs, and marked the beginning of the year by the solar culmination of the constellations, the Pleiades still occupied the place of honour, marking a date not later than 2150 B.C.

To this date approximately the division of the entire of the then visible heavens into constellations has been assigned by so good an authority as the late R. A. PROCTER, who has moreover pointed out the curious fact that the region surrounding the south pole of the day remained unplotted till in the 18th century a new school of astronomers arose who sought to preserve the memory of themselves by dubbing every petty cluster with a name of their own choosing. Those generally accepted, such as Octans or Antlia Pneumatica, not to speak of absurdities such as the Oak of Charles II or the Sceptre of Brandenburgh, sound strangely out of place besides the grand old constellations. Even from these we may learn a lesson, and the mapping of the celestial sphere carefully studied is a record of much that is interesting and much that is valuable in the history of humanity.

WEI-CH'I.

By Z. VOLPICELLI.

About three years ago I wrote a short sketch on Chinese Chess. While gathering materials and making enquiries on that subject, my attention was drawn to the other great game of China, which she invented and which she considers far superior to Chess. This alone would be sufficient to awaken curiosity. We are so accustomed to consider Chess as unquestionably the *royal* game, that the simple statement that a country possesses Chess and another game, and considers the latter superior, is startling. We naturally feel drawn on to examine this unknown rival and find out for ourselves whether it deserves its claimed superiority. Before we know it, *Wei-ch'i* has therefore the merit of rousing our curiosity by its great reputation. *Wei-ch'i* is considered *par excellence* the game of the literary class, while Chess is the favourite diversion of military men. This fact establishes its precedence in China and has also value in our eyes, because, if the flower of the nation, which is always to be found in the civilian class, prefers *Wei-ch'i*, it must possess, at least for the Chinese mind, great attractions.

Even at first sight *Wei-ch'i* presents several striking peculiarities. The board on which it is played is very large, containing 361 places; the men are very numerous, as nearly 200 may be required on each side, and its nature is different from that of the games we are already familiar with. The

pieces cannot be moved,—once placed on a spot they remain there until the end of the game, unless surrounded and destroyed by the enemy, when they may be removed from the field of battle. The game does not consist of a series of skilful evolutions by which each player tries to manœuvre its men to the best advantage and to secure its object in the least number of moves; it is a game of position, each side tries to place the pieces in the most favourable way so as to secure by their combination a winning position. This last peculiarity lends it all its charm. We find a game totally different from those we have been accustomed to. The difference is not in detail, but in the essence of the game. It belongs to quite a different order from Chess and Draughts. Moreover, though a game of extreme difficulty, it is of the greatest simplicity. There is not a number of different pieces, each with its own peculiar move; all the men are similar, they can be placed anywhere, and they cannot move. Perhaps it is owing to this that it has altered so little in passing to other countries; while Japanese Chess is as different from Chinese as the latter is from European Chess, *Wei-ch'i* is played, one may say, identically in China and Japan. In the latter country it is called "Go-bang" and is in high repute. In the old feudal days the nobles vied with each other in having attached to their courts celebrated Go-bang players, just as they were proud of their bulky wrestlers; even now there are professionals who play with such care and reflection that a match-game may often take up several days. The true Japanese Go-bang, which is identical with *Wei-ch'i*, is quite different from the game which goes under that name among foreigners. The latter is a much easier game, which consists in getting five men in a line, no matter whether horizontal, vertical or diagonal, and is called "Go-mutche" by the Japanese.

The object of the game of *Wei-ch'i* may be stated very simply, though it will be found sufficiently difficult to carry it

out in practice. It is to occupy as much space as possible on the board and to prevent the adversary from doing the same. This can be done both by occupying places with one's men and forming enclosed spaces called territories, as well as by surrounding and taking the adversary's men, in which case, the space, formerly occupied by the enemies one has destroyed, becomes part of one's territory or conquered space on the board. To show how this simple principle acts in play producing a very interesting game will be the object of what follows.

Wei-ch'i is played by two players, on a board special to the game and with two sets of men of different colour. I shall begin by describing the board, and then pass on to the men and to the game in general.

The Wei-ch'i Board.

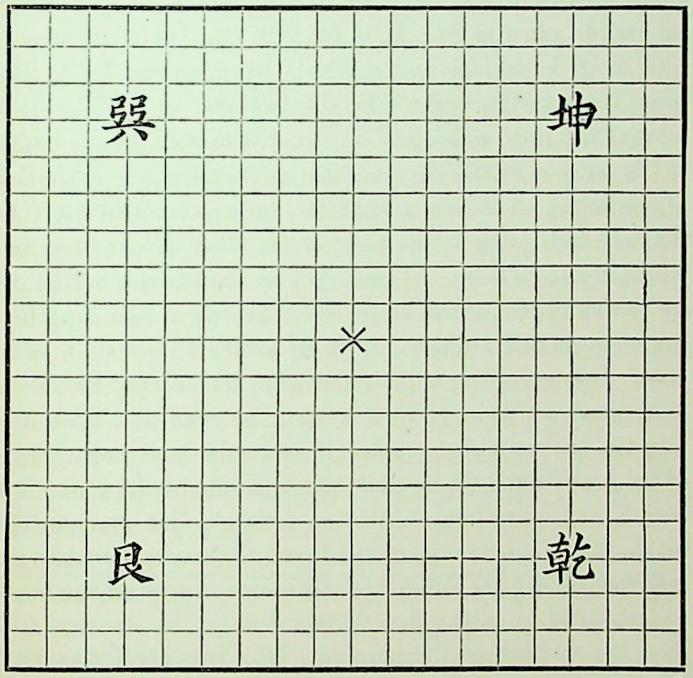
This is divided into squares like a chess-board, but into a much greater number, and without any alternation of colour, their total number on the *Wei-ch'i* board being 324, 18 × 18. Even this large number does not fully represent the scale of the game, because, as in Chinese Chess, the pieces are played on the intersections of the horizontal and vertical lines and not on their intervals; thus, as there are 19 lines in either direction, the total number of places on which the men can be played is 19 × 19 or 361. This is a very large number, and at first the game appears quite bewildering from the size of the board and the number of men employed.

The Chinese, in the books which treat of the game, divide the board into four equal parts, which they call "corners" (角 *chiao*[3] or 隅 *yü*[2]) and which are called by the names of the four Chinese tones:—

平 for the lower left corner.
上 „ upper „ „
去 „ „ right „
入 „ lower „ „

In each of these four sections a place is generally marked out at a distance of four steps along the principal diagonal counted from the outer angle. Each spot is therefore equidistant from the two external sides of the section. These four points are called 艮 (*ken*^{4}), 巽 (*hsün*^{4}), 坤 (*k'un*^{1}) and 乾 (*ch'ien*^{1}), and the players generally begin the game by alternately covering them, each player occupying two at opposite angles. Sometimes the centre of the board is also marked. Diagram I. will serve to show what the *Wei-ch'i* board is like and how it is divided.

上 I. 去



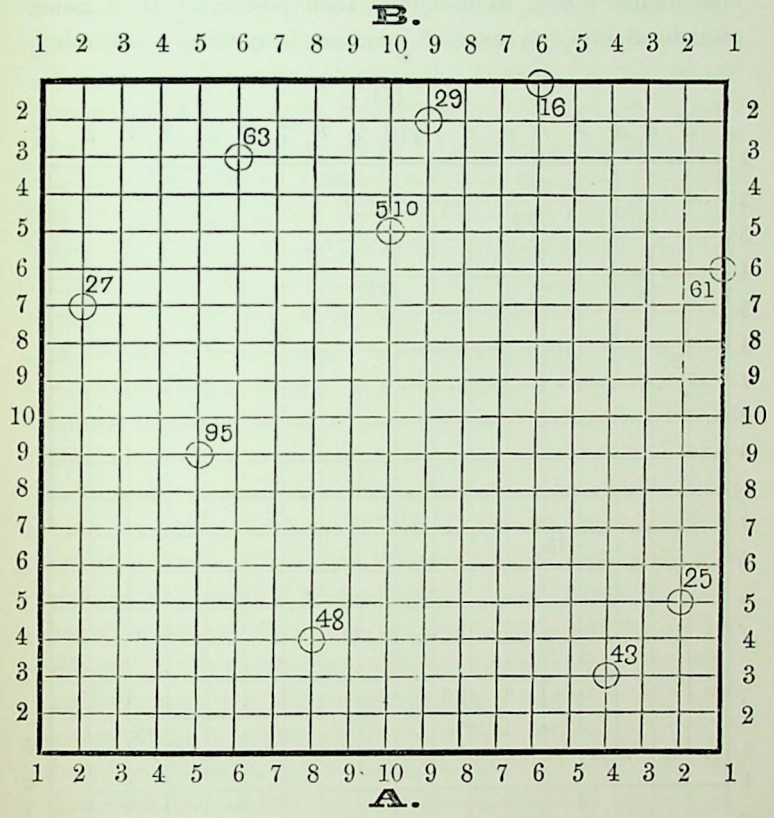
平 入

I think this place is the most appropriate to give an account of the notation employed by the Chinese to indicate the

different spots on the board where the men are played. As the board is so large, for convenience the notation is adapted to the division in four sections, which we have seen to exist, and there is a separate notation for each of the 平上去 and 入 corners. The Chinese have adopted a system which is similar to that used in analytic geometry of two dimensions. Every point is determined by giving its perpendicular distances from two axes at right angles, that is to say, by two co-ordinates. They fix the origin of the axis of the abscissas as well as of that of the ordinates at the corner of the board, and the two sides represent the two axes. They count on each of these lines up to the middle of the side of the board from 1 to 10. It is evident that, as there are 19 lines both horizontal and vertical, by counting from each towards the middle of the side, the two sets of numbers will meet at the 10th, which will be common to both, that is to say, to the series commencing from the right and going to the left of one corner or section, and to the series commencing from the left and going to the right of the other corner or section which lies at its side. As each spot on the board is designated by two numbers, which respectively represent the length of the abscissa and ordinate, it is necessary to show in what order they are always used, that the reader may be able to understand in which direction each is counted. For this purpose, one must place one's self successively at each corner of the board and look towards the opposite corner; one will then have a series from 1 to 10 on the right side and another on the left. Let us suppose the first to represent the abscissas and the second the ordinates, then every point on the board is designated by giving first the number of the ordinate and then the number of the abscissa. This rule applied to each corner produces the puzzling result that each side of the board serves for counting the abscissas of one corner or section and the ordinates of the next corner or section.

Diagram II will facilitate the understanding of the above explanations. Let *A* and *B* represent the two players. [As will be seen later on, the position of the players is quite immaterial in this game; both could play from the same side of the board, the only important distinction being the colour

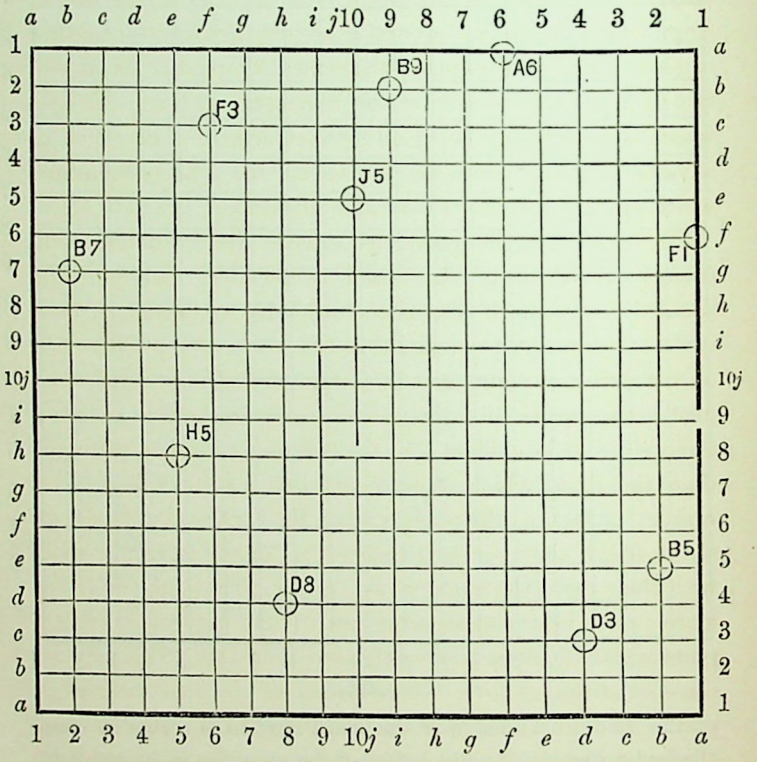
II.



of the men.] The side of the board next to *A* serves to count the ordinates in its right half and the abscissas in its left half; the side running up on the left serves to count the ordinates in its lower half and the abscissas in the upper half; the side

of the board next to B serves for the ordinates on B's right (A's or the reader's left) and for the abscissas on B's left (A's and the reader's right). The side running down on the right serves for the ordinates in its upper half and for the abscissas in its lower half. To familiarise the reader still more with the Chinese notation, a few spots have been marked with the numbers used to designate their position. A notation which employs two series of numbers is naturally confusing,

III.



and therefore, in future, when I shall have to indicate any place on the board, I shall employ letters instead of numbers

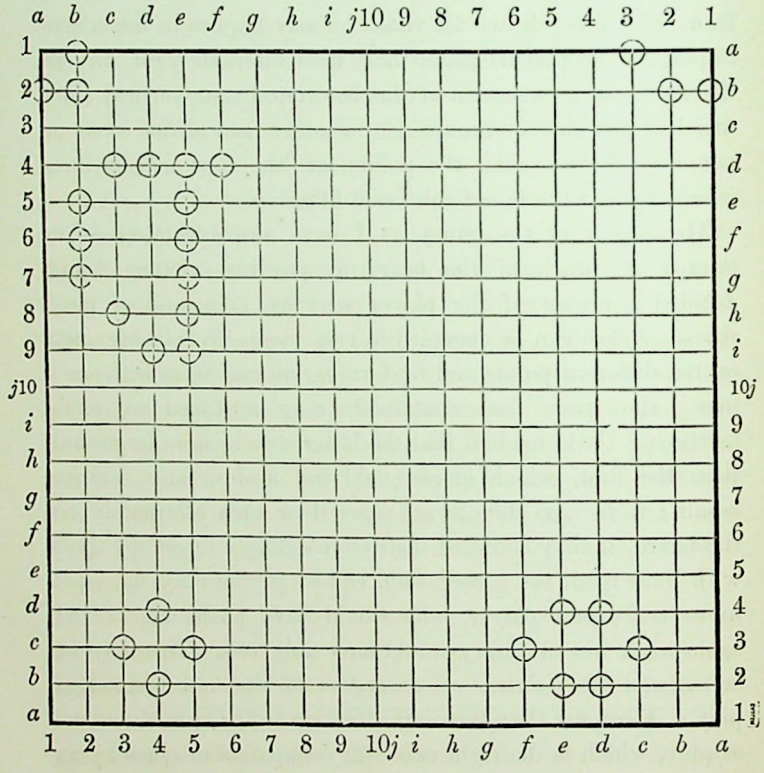
to indicate the ordinates and keep the numbers only for the abscissas. We shall have thus two series at our disposal, one from *a* to *j* and the other from 1 to 10 ; this slight variation will render the notation clearer, and we shall adhere to the spirit of the Chinese notation. Diagram III shows how this modified notation is applied to the board and how the examples given in the preceding Diagram will be designated.

The men employed in *Wei-ch'i* are round and flat, very much like buttons, and of two colours—black and white. Each player has a bag or small basket full of men of one colour, from which he draws all those he may require in the course of play. The players place their men alternately on any of the points of intersection of the horizontal and vertical lines which is not already occupied by another man of the same or adverse colour ; even the points on the four margin-lines which enclose the board can be so filled up.

The object of the game, as I have already stated, is to occupy as much of the board as possible, victory being decided in favour of the player who has command of most spots. Space can be occupied in two ways—by placing men on the different points and by forming an enclosure with one's men, the space thus contained being reckoned as one's territory. It is evident that the latter way is more important than the first, which alone could not lead to any decisive result ; in fact, as the players place their men alternately on the board, if they confined their efforts simply to occupy spots with their men, the game would end by giving only one spot more to the first player, who would have possession of 181 spots while his adversary would have only 180. This may be considered the *reductio ad absurdum* of the first method of play. We must then turn our attention to the second method of play, which is the right one—the occupation of space by an enclosure of men—it is this which gives the name to the game, *Wei* (to surround) being its principal object.

The simplest possible enclosure that can be formed anywhere on the board, is that of four men enclosing one spot which is called an *eye* and can be seen in the lower left-hand corner of Diagram IV. The next in simplicity is that formed by six men enclosing two spots,—an example is given in the lower right-hand corner of the same diagram. In the same way larger enclosures can be formed with a greater number of men, as will be seen in the upper left-hand corner of Diagram IV.

IV.



All enclosures require a smaller number of men to form them when they are situated round a corner or angle of the board,

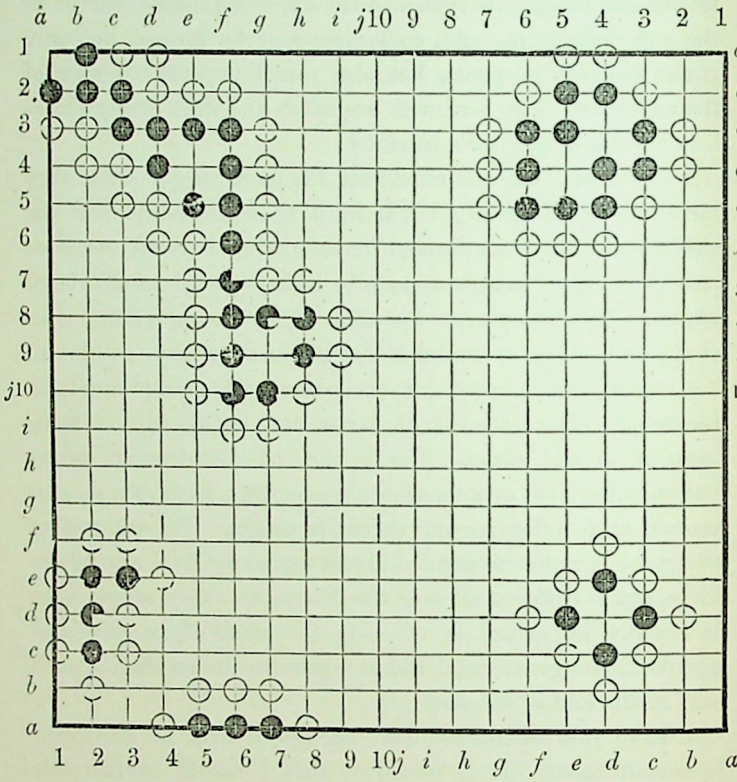
as then only two sides need be formed, the other two being the limits of the board itself. Thus an eye can be formed with three men only, as is seen in Diagram IV in the upper left-hand angle with the three men *a* 2, *b* 2, and *b* 1. Even *two* empty spots can be surrounded by three men in such a favourable case, as is shown in the upper right-hand corner of the same diagram. All enclosures may be formed not only round unoccupied spots, but also round unprotected men of the adversary, who forthwith are taken and their empty places become the conqueror's territory.

From what has been explained, the game might seem very tame and uninteresting, but it must be remembered that the enclosures, which are formed for occupying as much space as possible on the board, are made by both players, each of whom, while he tries to enlarge the area of his own territory, tries at the same time to diminish that of his adversary, as also to destroy in certain cases his enclosures and appropriate their territory. The element of strife now comes in and lends interest to the game. Every part of the extensive board becomes the field of numerous engagements, as the adversaries pursue their offensive and defensive tactics. The interest of the game is not concentrated in one spot as at Chess, around the king, but is diffused all over the board, as every single spot is equally important in effecting the result of the game and counts in the grand total which represents the position of each side at the end of the struggle.

I have just mentioned that enclosures may be destroyed in certain cases. It is necessary that I should explain this important and interesting feature of the game. In the course of play, while one is forming enclosures and extending one's territory, it often happens that one can surround completely some of the adversary's men. These, under certain circumstances, are then considered as dead, removed from the board, and their places become part of one's territory.

Diagram V shows the four black pieces at, *c* 2, *d* 2, *e* 2 and *e* 3, entirely surrounded by white men and therefore dead. We have another example in the three black men situated at, *a* 5, *a* 6 and *a* 7, on the side of the board, and

V.



which can be taken by a much smaller number of white pieces than if they were placed in the middle of the board, as it is enough to surround them only on three sides, the other side being formed by the limit of the board itself. The four black men at, *d* 3, *e* 4, *d* 5 and *c* 4 present a more complicated case; though they are surrounded on all

sides by white pieces, still they are not dead, because they contain themselves one empty space. To destroy them, it will be necessary to play another white man at *d* 4, then the black men being blocked on all sides both externally and internally will be considered as dead. We see thus, that though not actually dead, they are in imminent danger,—they will be captured at next "move," as we should say in Chess; in such a case one may adopt a term with which Chess has made us familiar, and say they are "under check."

In the upper right-hand corner of Diagram V we have another group of black men surrounded by white ones; they are not however dead, nor can they be possibly destroyed by any manner of play. In fact, we can see that the black pieces contain within themselves two separate empty spots, *c* 4 and *d* 5, forming two complete eyes, which would have to be filled up to accomplish their destruction. Now this is impossible, because, as the players play alternately, as soon as White has filled up one eye, Black at his turn will take the man that White has played, because it will be situated in the midst of his men, and therefore may be considered as dead. This might go on for ever, White filling up one eye and Black taking the piece, as White to win the whole group of men would require to be able to play twice in succession.

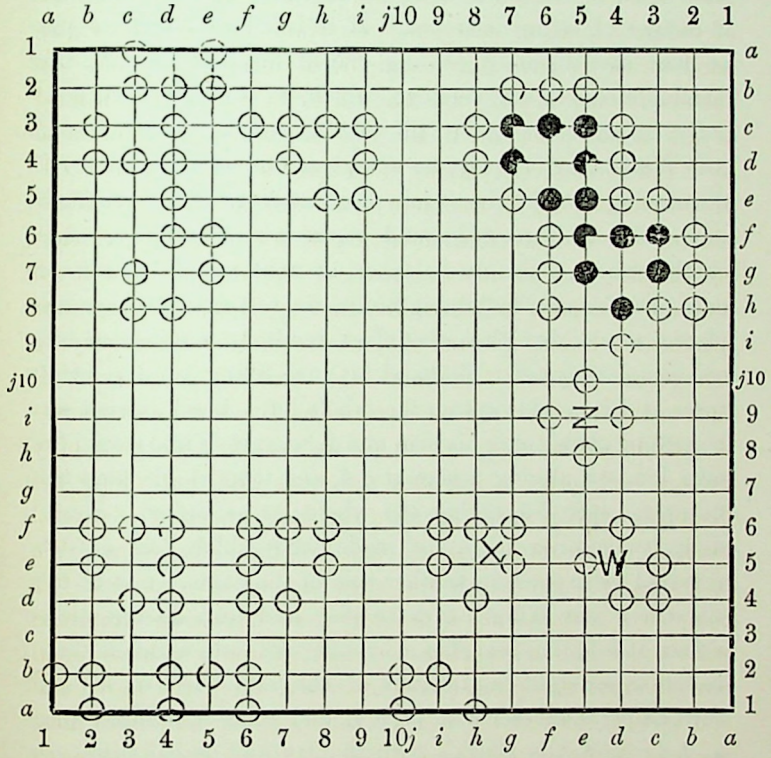
We can now establish a fundamental rule of great importance, that, whatever group of men contains within itself two or more empty spots forming complete eyes is secure against any attack. Though surrounded it cannot be destroyed; it forms an intangible territory. It does not matter where and how far from each other these eyes are situated, provided they form part of one unbroken group of men joined together. The upper left-hand corner of Diagram V exhibits a territory which cannot be conquered by the adversary, because it contains three complete eyes at, *a* 1, *e* 4

and *g* 9, any two of which alone would be sufficient to secure its independence.

It is necessary now to explain what constitutes a complete eye and how several of these can be joined together to form one whole unconquerable territory. A complete eye is one formed by men all of which are joined together and none of which can be destroyed, as, naturally, if any could be, the eye losing a part of its components would no longer exist. In the lower left-hand corner of Diagram VI we have four examples of different kinds of complete eyes, while in the lower right-hand corner we have four examples of incomplete ones. In the eye formed by *j* 1, *j* 2, *i* 2 and *h* 1, the white man situated at *h* 1 is not joined on to the others, and can be surrounded by Black successively playing three men at *g* 1, *h* 2 and *i* 1. In the eye marked X, the piece at *h* 4 can be taken by Black playing successively four men at *g* 4, *h* 3, *i* 4, and *h* 5, thus surrounding it. In the eye marked W, the two men at *e* 5 and *d* 6 can both be taken, the first by Black playing four pieces at *e* 4, *f* 5, *e* 6 and *d* 5, the second by Black playing four pieces to *e* 6, *d* 7, *c* 6 and *d* 5. In the eye marked Z, each of the four men can be captured by Black if he surrounds it. From all the above examples we see that the men only protect each other along straight lines and not along the diagonals: this is very important for the connection of several eyes, so as to form a single indestructible enclosure. We had already found that it was necessary to have at least two complete eyes to secure a territory; we have now examined what constitutes a complete eye, and in doing so have found how different men protect each other, *i.e.* along the horizontal and vertical lines of the board. Along these same lines must the men be placed that serve to join different eyes forming a territory. In the upper left-hand corner of Diagram VI we have an instance of how different groups of men are to be joined so as to mutually protect each other. We have, in the first place,

a territory containing two complete eyes, and therefore secure against attack, extending from the top of the board to *d* 6 and *e* 7; in its vicinity there are two other groups which can be destroyed if not joined with it. We have the three men at *c* 7, *c* 8 and *d* 8, which may be joined either at *e* 8 or *c* 6, and the eight men at *f* 3, *g* 3, *h* 3, *i* 3, *g* 4, *i* 4, *h* 5 and *i* 5, which can also be joined either at *f* 2 or *e* 3. White can, by playing

VI.



only two men, form an extensive territory comprehending four complete eyes, and Black cannot prevent him doing so, because in each case White has the option of two ways of joining his

men, and if Black prevents one by occupying the spot himself White can occupy the other.

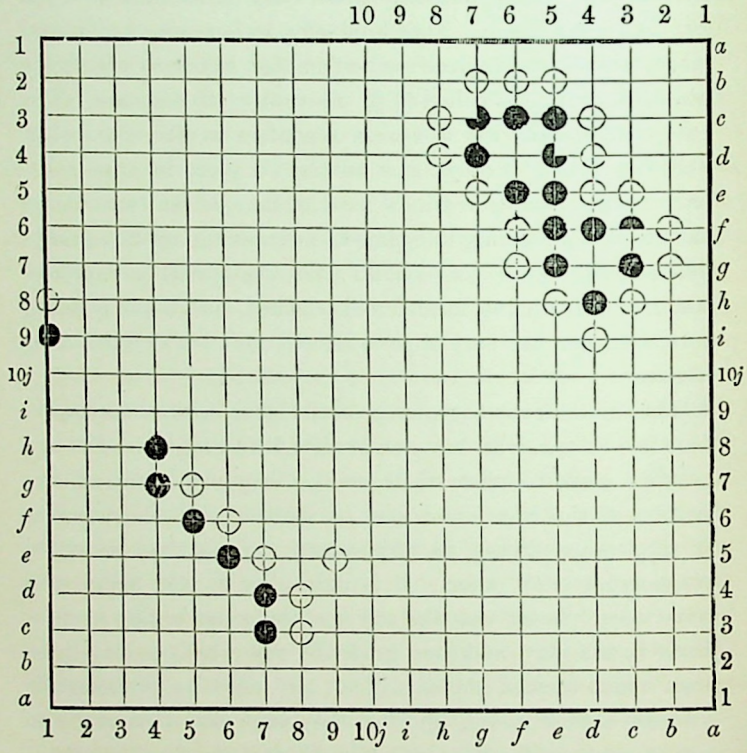
The joining of men along the horizontal and vertical lines is most important, and every effort is to be made to effect it for one's self and to prevent the adversary from doing so. The position in the upper right-hand corner of Diagram VI shows how on the placing of one man may depend the question whether a territory shall belong to Black or White. Here we have a lot of black men almost surrounded by white ones and in danger of being destroyed. If it is Black's turn to play he may save them by placing one of his men at *h* 5, thus forming a second complete eye, which, as we have seen, guarantees an enclosure against all possible attack. But if instead it is White's turn to play, he will place one of *his* men at *h* 5, threatening to take the black piece at *h* 4, which would be surrounded on three sides and be, as we should say, under check, namely, liable to be taken at next move. Black can only save this man by joining him to the rest with another man placed at *g* 4, but then the black territory would have only one complete eye and White, at his turn filling up the empty space at *d* 6, would capture the whole lot. Black cannot save himself by abandoning his man at *h* 4, because White would first take him by placing a man at *g* 4, and then at his next turn fill up the spot *d* 6, taking the whole lot as before. Here a difficulty however might be made, and which can only be removed by explaining another rule of the game. Let us take the case it was White's turn to play and that he has placed a man at *h* 5, thus securing a winning position, which is shown in the upper right-hand corner of Diagram VII; on his next turn he plays another man at *g* 4, and takes the black piece at *h* 4: now it is Black's turn to play and he has three men at *g* 3, *f* 4 and *g* 5 surrounding the white man just played at *g* 4, which we may say is under check; if he can play a black man at *h* 4 he can take this white man, and we should thus

return to the original position from which we started, and White again could take the black man at *h* 4, and Black again repeat his play and so on *ad infinitum*, now White taking the black man at *h* 4, and now Black taking the white man at *g* 4. As this would put an end to the game, there is a rule that prevents a player from immediately taking a piece under these circumstances, *i.e.* when by taking it he returns to the original position, where the piece he has just played can be taken again: he must first play another piece in some other part of the board, and only after that, on his next turn, can he take that piece. This kind of position, where the rival pieces are dovetailed into each other and can each attack one piece alternately is called 打結 *Ta chieh* by the Chinese. This rule, which prevents a useless repetition of the same play, obliging the adversary first to place a piece in some other part of the board, reminds us that though for convenience sake we are dissecting the game and examining separate groups of men, the play goes on all over the board; everywhere territories are being formed and attacked, and if one is losing in one corner one may hope to recoup one's self in some other corner.

This renders the beginning of the game almost incomprehensible to one who has not studied it thoroughly. The two players seem to place their men at haphazard, now in one corner of the board and now in another; it looks rather as if they were trying to form pretty figures than trying to circumvent each other. It is only after a good many men have been placed that the object of the game begins to show itself in the play, and then gradually one perceives that those men which seemed played without any offensive or defensive purpose are all useful, and that they were placed originally to act as outposts for the territories which it was foreseen would be formed around them, or as posts of observation to annoy the enemy. In fact, as the object of the game is to occupy

as much of the board as possible and to prevent the adversary from doing the same, it is necessary to have men strewn about everywhere, which may be, in the course of play, joined together in one large territory, and which may prevent the adversary from joining his men. To show the advantage which may be obtained from one of these detached men placed at the beginning of the game, it is sufficient to examine a position which may often occur when one of

VII.



the players is trying to surround his adversary on one side and the latter tries to escape by prolonging his men in a

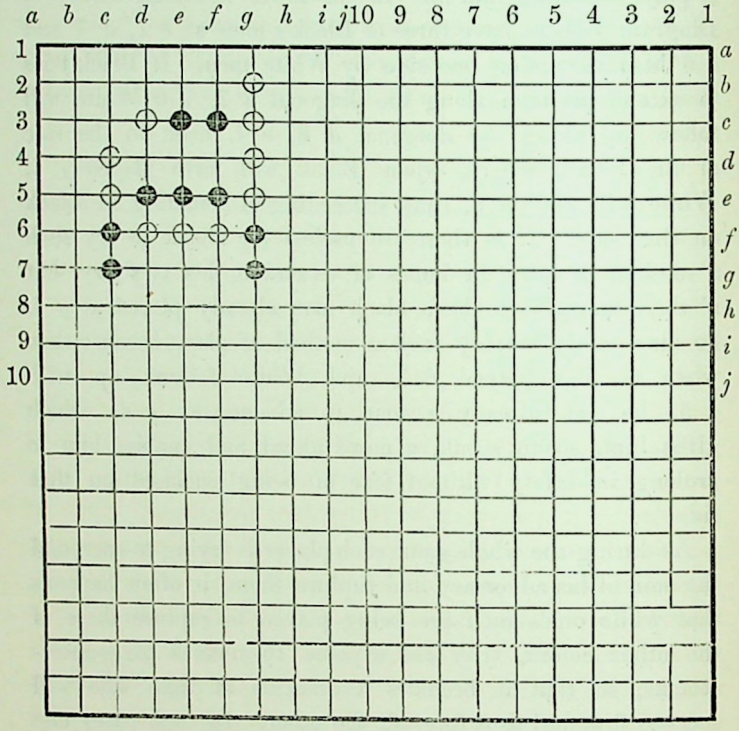
diagonal. If both persist in prolonging their men in *échelon*, the attacking party must win, because as soon as the defender reaches the side of the board (which he must reach if he prolongs enough) his adversary will do the same at next turn of play, hemming him in. In the lower left-hand corner of Diagram VII we have three of Black's men at *c* 7, *d* 7 and *e* 6 hemmed in on one side by White men. If Black tries to extend his men along the diagonal *d* 7, *e* 6 White will follow up along the diagonal *d* 8, *e* 7, even to the side of the board, where, when Black will have played *j* 1, White will play *a* 9, thus succeeding in hemming in Black on that side. It is therefore useless for Black to try such a method of play in hopes of extending his territory, but if there happens to be a black man already placed at *g* 4, he may safely employ such a method of play, because then when he has played *f* 5, and White follows up with *g* 5, he has already a man in advance at *g* 4, which gives him, so to speak, a move ahead and enables him to prolong in safety without fear of being enclosed on that side.

As during the whole game each player is trying to surround the men of his adversary and capture them, it often happens that while one's men are being played to capture those of the other colour, they are exposed themselves to counter-attacks, so that it becomes a question of time who will succeed first and thus forestall the other. In such cases one must calculate very carefully the number of moves[1] required by each side to secure victory, just as in an end-game at Chess where each player has a passed pawn that can queen, and all depends on a move.

[1] I here use the term "move" because it is so familiar to us through our game of Chess; but it must be understood that there is no such thing as a move in the game of Wei-ch'i, where the pieces always remain where they are placed, and that the word "move" is used instead of the cumbrous phrase "turn to play."

The upper left-hand corner of Diagram VIII will give a simple instance of the above kind of play. Here we have two sets of white and black men which are so situated that

VIII.



a portion of each is dovetailed into the other and threatened with capture unless it can forestall its fate by dealing destruction on the other. The white men are in three groups: first four at *g* 2, *g* 3, *g* 4 and *g* 5, another three at *d* 3, *c* 4 and *c* 5, and then the three men at *d* 6, *e* 6 and *f* 6, which are already surrounded by Black on three sides and will be inevitably taken unless White succeeds in destroying betimes a portion of the attacking forces. This

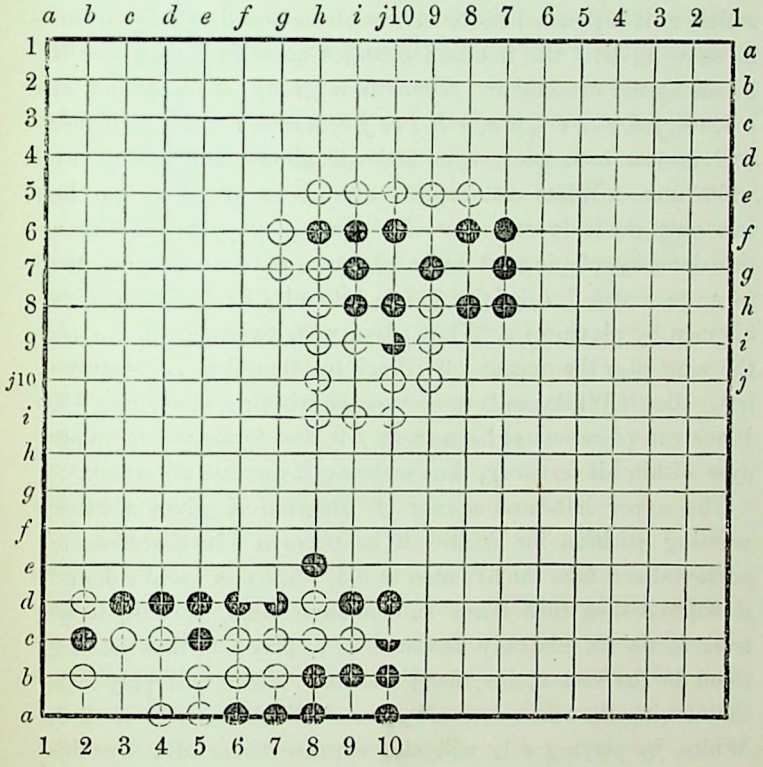
is his only resource, because he cannot hope to escape by prolonging his line of men in any direction, as Black has already overlapped him with his two men at *c* 7 and *g* 7. In fact, if he plays a man at either *d* 7 or *f* 7 Black promptly plays a man either at *d* 8 or *f* 8, thus closing all exit. Escape being impossible, let us see how White will fare if he adopts a bolder policy and attacks his adversary. Black's men are distributed in four groups: there are two men at *e* 3 and *f* 3, two at *g* 6 and *g* 7, two at *c* 6 and *c* 7, and three at *d* 5, *e* 5 and *f* 5, which are already surrounded by White on three sides and may be destroyed before Black can compass the destruction of White's men. This would be easy enough if there were not the two men at *e* 3 and *f* 3, because then White, having to play, would succeed in achieving the capture of the three men *d* 5, *e* 5 and *f* 5 before Black could capture the white men *d* 6, *e* 6 and *f* 6. But the position being as it is the thing is more difficult, and White can win only by accurate play. His first move must be to *f* 4, and Black must at once join his men by placing a man at *e* 4; if he does not do so, White at his next turn will play one of *his* men at *e* 4, thus rendering impossible any connexion of Black's men, which will be irretrievably lost. If Black plays *e* 4, the position is again difficult for White, because the now connected group of six black men again requires the placing of three white men at *e* 2, *f* 2 and *d* 4 to be entirely surrounded: under another form we are in the same position as before. Each player can capture a group of men, and requires three moves to do it. White has only the advantage of first move, an advantage which may be lost if he does not play correctly; as before, his only resource is in pursuing a constant attack. He must play *f* 2, threatening again Black's men: Black can try to escape capture by extending his men, but, as was pointed out before, the prolongation of an attacked line, unless it be

towards another friendly piece, leads to no result. In fact, if Black plays *e* 2, White plays *d* 2, always threatening Black's men with capture in two moves. It is necessary that he should always preserve such an attack, because Black in three moves can always capture the three men at *d* 6, *e* 6 and *f* 6, which form part of White's attacking force and which if once destroyed would break up all White's attack and secure Black's men completely. If Black extends again to *e* 1, White plays *d* 1, preserving his position of a winning attack in two moves: thus we see that Black's men are irremediably lost and White has saved his pieces, which, after the capture of the enemy, can be connected with the rest forming an impregnable enclosure. This simple elementary position is instructive, because it shows how, in play, the men of both sides can get mixed up in such a way that while an attack is being made, a portion of the attacking force may be subjected to a counter-attack which if successful destroys the whole of the original attack. In such cases it is necessary to play with great care and to calculate accurately how many moves are required for the successful completion of the attack and counter-attack.

The following position will be instructive in showing not only how important a single move may be, but also how important is the order in which some moves have to be played. In the lower left-hand corner of Diagram IX we have a group of white men situated at, *c* 6, *c* 7, *c* 8, *c* 9, *d* 8, *b* 5, *b* 6, *b* 7, *a* 4 and *a* 5 which are almost entirely surrounded by black pieces and in imminent of danger of being captured: it only requires two black men to be placed at *b* 4 and *a* 3 to accomplish this, but the order of these two moves is very important. If Black plays *a* 3 first he wins, because if White joins his men at *b* 4 Black plays *b* 3, taking not only the men that were under check, but also the other two men at *c* 3 and *c* 4, and if he plays something else, Black plays *b* 4, taking all the men

under check. But if Black, by mistake, plays first *b* 4, he loses: then White plays *b* 3, capturing the black man just placed at *b* 4, forms one complete eye, and whatever Black may do, he will form a second eye rendering his territory intangible. In fact, White can form a second complete eye by placing a man at *a* 2, and if Black, to prevent this, does what must be

IX.



done in such circumstances, places *himself* a man at *a* 2, White plays *a* 3, threatening to take *a* 2 by the next move at *a* 1; if Black extends by playing himself *a* 1, White plays *b* 1, capturing both men and still forms a second complete eye. If Black, having played *a* 2, plays *b* 1, trying again to

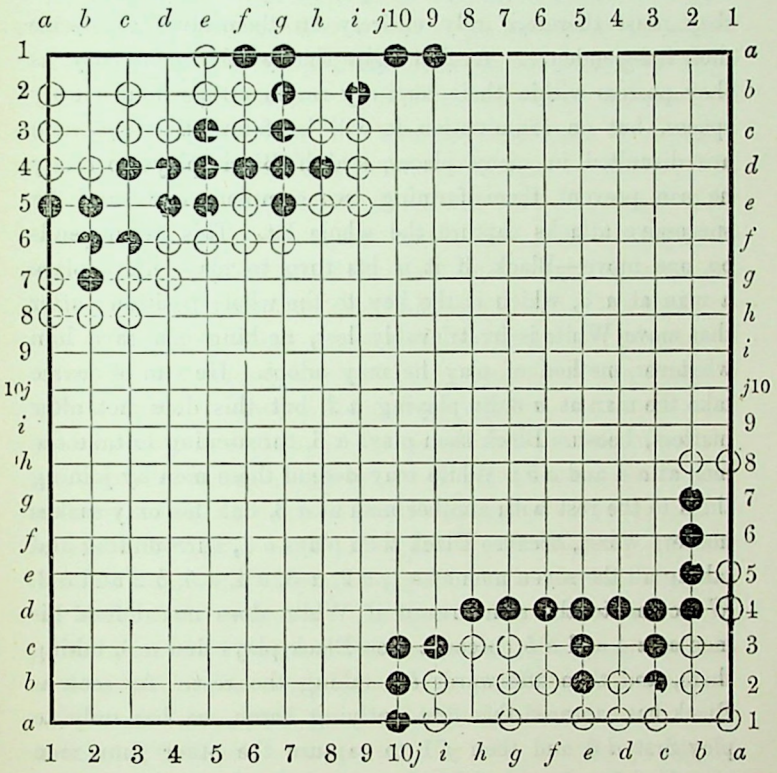
prevent the formation of a second complete eye, White can play *c* 1, capturing the black man at *c* 2, and then afterwards at his next turn by playing *a* 1 will capture both the black men at *a* 2 and *b* 1, and with three incomplete eyes at *a* 2, *b* 1 and *c* 2 it will be very easy to form one complete one either by filling up *c* 2 or *b* 1.

In the centre of the same diagram (IX) we have a position which, as it is situated in the centre of the board, will be useful in showing how the notation changes according as a spot is in one corner or another. There is a group of black men at *h* 6, *i* 6, *j* 6, *f* 8, *i* 7, *g* 9, *g* 7, *i* 8, *j* 8, *h* 8, *h* 7 and *j* 9 which enclose two incomplete eyes and are almost surrounded by white men. White can capture almost all of them, but he can only do it in one way—he must play *f* 9. He then threatens by playing, at his next turn, *g* 10, to capture the seven men at *h* 6, *i* 6, *j* 6, *i* 7, *i* 8, *j* 8 and *j* 9; if Black joins his men by playing *j* 9, White plays *g* 8, capturing them all the same *plus* the man at *g* 9; Black has therefore no resource left. But if White omits to occupy the winning position at *f* 9, Black can place one of his men at *f* 9, and form two complete eyes within his territory, thus securing it against all attack.

The upper left-hand corner of Diagram X gives another winning position for White: if he plays *a* 6 he threatens to surround and take the five men at *a* 5, *b* 5, *b* 6, *b* 7 and *c* 6, and it will be seen that Black cannot save them, because if he tries to do so, his only resource is to play *c* 5, thus joining them to the rest of his men; but then White will play *h* 2, threatening the whole lot, and even if Black extends to *h* 1, White, by playing *i* 1, will still capture them all; by this method of play, Black not only will not save five men but will lose fifteen or sixteen more. It will be better therefore for Black, after White has played *a* 6, to abandon the five men under check and look after the safety of the rest by playing *h* 2, thus joining the men that are already almost surrounded

to the three men at *i* 2, *a* 10 and *a* 9, which are not surrounded. He thus forms a small enclosure of two open spaces at *h* 1 and *i* 1 and may hope to form another by extending from the three men which are free. The fate of this manœuvre will depend on the position his other men occupy on the

X.



board; it will succeed if he can lead up to men that are placed near and with whom it may be easy to form an eye or enclosure.

The position in the lower right-hand corner of Diagram X shows how by placing a single man in the right position one

may prevent the adversary from strengthening his position and keeping possession of an extensive territory. Here we have a large number of white men almost completely surrounded: they cannot be extended so as to join their companions at *a* 8 and *b* 8, and so *prendre la clef des champs*, as the French say, because Black can always play a man at *a* 6 or *a* 7, cutting off all possibility of communication: they must therefore rely entirely on themselves to secure their independence. At first sight this would seem easy, as they possess within their territory no less than four empty spaces, but on examination it will be found that the men are disunited in many places, and if Black plays correctly he can prevent them forming two complete eyes and by successive attacks capture the whole lot. This all depends on one move—Black, if it is his turn to play, must place a man at *a* 3, which is the key to the whole position; after that move White is irretrievably lost, nothing can save him whatever method of play he may adopt. He can of course take the man at *a* 3 by playing *a* 2, but this does not alter matters, because Black then plays *a* 6, threatening to take the men at *a* 4 and *a* 5; White may defend these men by joining them to the rest with another man at *a* 3, but this only makes matters worse, because Black then plays *b* 1, surrounding and taking all the seven men at *a* 1, *a* 2, *a* 3, *a* 4, *a* 5, *b* 2 and *b* 3. We come to the same result if White does not defend his men at *a* 4 and *a* 5, because then Black plays first *a* 3, taking them, and then afterwards *b* 1 taking the rest. As soon as Black has captured this first outlying batch, he has only to play first *d* 3 and then *f* 1 to capture the other four men at *c* 1, *d* 1, *e* 1 and *d* 2, after which he has only to play *f* 3 and then *h* 1 and *h* 2 to take the remaining white men. The same conclusion would have been reached if White had adopted a different method of play, and when Black had played his first move *a* 3, had given up his men at *a* 4, *a* 5,

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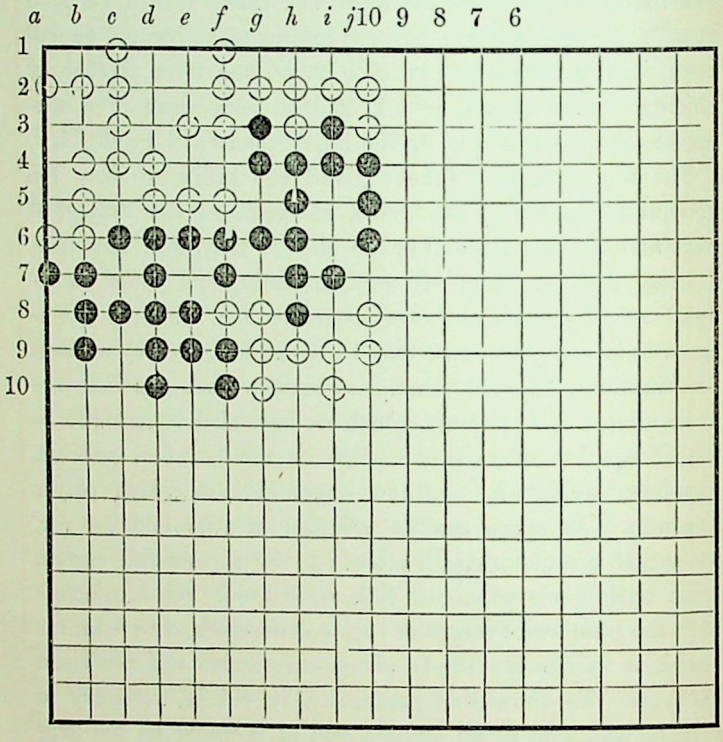
and tried to join his men by playing *b* 1; Black would then, after taking the men at *a* 4 and *a* 5, have played *a* 2 and *d* 3, threatening to take the whole lot *a* 1, *b* 1, *b* 2, *b* 3, *c* 1, *d* 1, *d* 2, *e* 1, and if White had joined again, playing *f* 1, Black would have played *f* 3, and then filled up *h* 1 and *h* 2, taking the whole group as before. To show of what importance is the spot at *a* 3, it will be sufficient to point out that if White has the move and places one of his men at *a* 3, he renders his position impregnable, because he will have then a complete eye at *a* 2, he can form another by placing a man at *h* 1 or *h* 2, and he joins them in a continuous group by filling up the interruptions at *b* 1 and *f* 1.

The few examples I have given will suffice to show the general character of the game and some of the strategical resources at the disposal of the player; they will show also, I hope, that the game is very interesting and full of excitement at all periods and everywhere on the board; positions apparently most desperate may be sometimes saved by brilliant combinations. It now remains to be shown how one discovers if the object of the game, which we have already stated to be the occupation of as much space on the board as possible, has been achieved, *i.e.* how one ascertains which player has won. As space can be occupied in a twofold manner, by actual occupation with pieces and by surrounding certain areas with one's pieces, it follows that one must calculate both the number of pieces of each colour which survive on the board, as well as the empty places surrounded and contained by them. To show this practically, it will be necessary to give an example of an ending, and as it would be too long to give it on the full board, I will give it on a quarter of the board, where the positions will be more simple and the calculations more easy.

In the upper left-hand corner of Diagram XI, there is the ending of a game on a quarter of the board, 10 lines each

side. Both Black and White have secured territories and have strengthened them against any possible attack. The strife is over, and we have only to estimate its results. Before doing so, however, it will be necessary to point out that there are several empty spots about the board, which belong to neither side and which may be considered as no man's land.

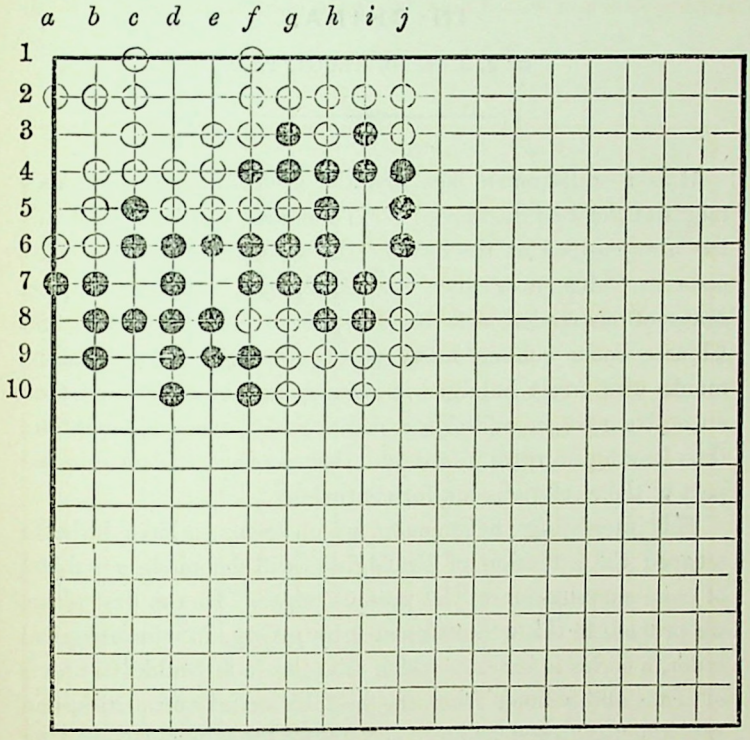
XI.



Such are the spots *c* 5, *e* 4, *f* 4, *g* 5, *g* 7, *i* 8 and *j* 7. They are now unoccupied and as they are surrounded partly by black and partly by white pieces neither side can claim them. In such cases they are alternately filled up by the two players before the counting begins. We will suppose then

that Black fills up *i* 8, and White *j* 7, and so consecutively Black, *c* 5, *f* 4 and *g* 7, and White *e* 4 and *g* 5, we shall arrive at the position shown in Diagram XII. Here all is filled up which is not surrounded and defended by pieces

XII.



and constitutes a territory. We can therefore commence our reckoning. We shall find that Black has 36 pieces which contain 11 empty spots, he has therefore won 47 places; White has also 36 pieces on the board, but they surround 17 empty spots, so that White commands 53 places, 6 more than Black, and he has won the game.

MILITANT SPIRIT OF THE BUDDHIST CLERGY IN CHINA.

By J. J. M. De GROOT, Ph.D.

It is a well-known fact that the first of all the commandments of the Buddhist creed is "Thou shalt not kill," and this has always stood at the head of the precepts of the Buddhist code in China, ever since its introduction into the empire. Many of our readers will therefore be surprised to learn, that Chinese books contain many passages relating to Buddhist monks who freely indulged in carnage and butchery and took an active part in military expeditions of every description, thus leaving no room for doubt that warfare was an integral part of their religious life for centuries.

This interesting phenomenon, which seems to have hitherto escaped the attention of sinologists, will be made a subject of close examination in the present paper. In the first place, we propose to throw light upon it by giving, in chronological order, a series of extracts which describe such Buddhistic feats of arms, all obtained from the best historical authorities, and subsequently to endeavour to account for the same by consulting the leading code of the laws of the Church. We do not doubt that the matter will be found highly instructive as illustrative of the spirit of the Church during many centuries in the Middle Kingdom.

It is recorded in 魏書 the History of the Wei Dynasty that the emperor 孝武 Hiao-wu, who ascended the throne of the northern part of the empire in the year of our Lord 532, had

in his military retinue 都維那惠臻 the General Karmadana Hwui-chen, who carried on his back the Great Seal and in his hand a sword[1]. Chapter 213 of 新唐書 the New History of the Thang Dynasty, and chapter 124 of 舊唐書 the Older History of this house, narrate the story of 圓靜 Yuen-tsing, a Buddhist priest of Mount 嵩 Sung in Honan, who, though an octogenarian, was at the head of a mutiny in 809 and, as such, was made a prisoner after an unsuccessful attack on the town of Loh-yang. Condemned to have his foot chopped off, he said in a tone of contempt to the executioner, who could not get his sword through the ankle-bone: "He can not cut off a leg, and yet he is called a strong fellow." Then putting the limb in a better position himself, the work was done.

The 獨異雜志 *Tuh-sheng-tsah-chi* relates in its first chapter: "The Yuen-thung convent of the Lu mountains is "situated at the foot of the Peak of the Horse's-ear, and is "a renowned Chaitya on the left bank of the Yangtsze. "During the Southern Thang dynasty it was endowed by the "emperor with a thousand *khing* of land, so that the provision "made for the support of several hundreds of disciples was "extremely abundant and plentiful. When the royal army "crossed the stream, the monks, having formed themselves "into a vanguard, advanced to prevent this; but the city of "Kin-ling (Nanking) surrendering shortly afterwards, they "retired. If Li Yuh[2] had loved the people as much as he "loved the monks, the people also would all have known how "to make a grateful return to his dynasty."[3]

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[1] See 日知錄, *Jih-chi-luh* chapter 29.

[2] The last monarch of the Southern Thang dynasty. This dynasty was annihilated in 975, when their capital (Nanking) was captured by the first emperor of the house of Sung.

[3] 廬山圓通寺在馬耳峯下,江左之名刹也。南唐時賜田千頃,其徒數百衆養之極其豐厚。王師渡江寺僧相率爲前鋒以杭,未幾金陵城陷,其衆乃遁去。使若李煜愛民如僧則其民亦皆知報國也.

It is especially in the first half of the twelfth century, when the northern part of the empire was conquered by the Kin Tartars and lost to the Sung Dynasty, that we see Buddhist monks appear as combatants. The 362nd chapter of 宋史 the History of the Sung dynasty introduces us to a military priest 趙宗印 Chao Tsong-yin, appointed 節制軍馬 Commander-in-chief of the infantry and cavalry in a campaign against the Kin Tartars; collecting Buddhist monks he formed a corps known as 以僧爲一軍號尊勝隊 the squadron of victorious monks. At the end of chapter 455 of the same work we read: "The monk "Chen-pao was a native of Tai-cheu and an abbot in the "Wu-tai monastery in the Shansi mountains. During the "troubles of the Tsing-khang period (A.D. 1126) he practised "military manœuvres in the mountains with his disciples. "The emperor Khin-tsung sent for him, engaged him in "a conversation in a side-hall, and showed him special "favour by bestowing rich presents upon him. Returning "to his mountains, Chen-pao collected more troops to "assist in subduing the enemy. The district was without "a governor, the enemy advanced in countless numbers; "for days and nights he repelled them, but finally he "could make head against them no longer. Convent and "cells were reduced to ashes. The chieftain of the enemy "issued orders for Chen-pao to be caught alive. Brought "before this chief, he contradicted him bluntly showing no "signs of faint-heartedness; and still the astonished leader "could not make up his mind to put him to death. By the "intermediation of the prefect Liu Tao he tried in a hundred "ways to persuade him to espouse the cause of the rebels, "but Chen-pao turned a deaf ear to him, and said: 'Our law "forbids us to betray our trust; I have promised the emperor "of the Sung dynasty to die for him; how can I violate

"my promise?' Cheerfully he suffered death by the sword."[4]

In chapter 401 of the History of the Sung Dynasty we have the following episode, dating from 1160, and relating to the same struggle between the houses of Sung and Kin. "At "the death of Liang, a military chieftain of the Kin dynasty, "the brave men of Chung-yuen rose to a man. Keng King "levied troops in Shantung, and Sin Khi-tsih advised him "to firmly resolve on an expedition southwards. The Buddhist "monk E-twan was fond of speaking about military matters, "and Khi-tsih had associated much with him in his leisure-"hours. During the latter's stay in the army of Keng King, "E-twan raised over a thousand men. One night he stole the "seals and fled. Keng King, mad with rage, wanted to put "Khi-tsih to death, but the latter said: 'Allow me a delay "of three days; if within that time I do not catch him, I will "forthwith consent to die.' Calculating that the monk would "undoubtedly hasten to the Commander-in-chief of the Kin "in order to tell him stories both false and true, he pursued "him post-haste, and having overtaken him, he parted his "head from his trunk, and then returned to report what he "had done."[5]

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[4] 僧眞寶代州人,爲五代山僧正。靖康之擾與其徒習武事於山中。欽宗召對便殿,眷賚隆縟。眞寶還山,益聚兵助討。州不守,敵衆大至,晝夜拒之,力不敵。寺舍盡焚。酋下令生致眞寶,至則抗詞無撓。酋異之,不忍殺也,使郡守劉騊誘勸百方,終不顧。且曰,吾法中有口回之罪,吾既許宋皇帝以死,豈當妄言也。怡然受戮.

[5] 金主亮死中原豪傑並起。耿京聚兵山東,辛棄疾卽勸京決策南向。僧義端者喜談兵,棄疾間與之遊,及在京軍中義端亦聚衆千餘。義端一夕竊印以逃。京大怒,欲殺棄疾,棄疾曰,匈我三日期不獲就死未晚。揣僧必以虛實奔告金帥,急追獲之,棄疾斬其首歸報。

In chapter 455 of the History of the Sung Dynasty we read:—"Muh Kien-chi was a Buddhist monk from E-hing in "Shang-cheu. In the first year of the Teh-yin period (A.D. "1275) he raised a body of volunteers to keep the country-"people under restraint; the emperor thereupon appointed "him governor of Lih-yang. In the winter of the same year "he perished on the battle-field, and the title Grandee of "Military Merit was conferred upon him. The monks of "Man-ngan also levied troops at that time, and bore as they "marched banners with inscriptions of this tenor: 'We "subdue the Maras,' and 'In times of danger we act the "part of military leaders, but when the difficulties have been "settled, we become monks again.' In course of time they "too were defeated and killed." [6]

The military spirit was still in full vigour with the sons of Buddha during the Ming dynasty. "In the Kia-tsing period "(1522-1567) the dignity of general was conferred upon "Yueh-khung, a monk of Shao-lin (Honan province). When "Man Piao called warriors into the field to make head against "the Japanese in Sung-kiang, over thirty of his disciples "formed themselves into a squadron, and killed a great many "Japanese with iron clubs. They all perished on the battle-"field." [7] That the monks of that same Shao-lin convent have been long famous for their dexterity in the noble art of fencing, is obvious from the fact that, already prior to the seventeenth century, there existed a book entitled 少林棍譜 *Fencing Manual of Shao-lin.* The author was one

[6] 莫誾之常州宜興僧人也。德祐元年糾合義士捍禦鄉閭，詔爲漂陽尉。是冬沒于戰陳。贈武功大夫。時萬安僧亦起兵，舉旗曰降魔，又曰，時危聊作將，事定復爲僧旋亦敗死。

[7] 嘉靖中少林僧月空受都督，萬表檄禦倭於松江，其徒三十餘人自爲部伍，持鐵棒擊殺倭甚衆，皆戰死.—*Jih-chi-luh*, chapter 29.

吳與章 Wu Yü-chang.[8] Finally, to quote chapter 292 of 明史 the History of the Ming Dynasty:—"Shi Ki-yen, a "*kü-jin* of the Ch'ung-chêng period (1628) was transferred "as Governor to Shen-cheu (Honan province). A rebellion "broke out. Sacrificing his private means he raised troops, "and intrusted the Buddhist monks of Shao-shih with the "work of drilling them."[9]

So far for the bare historical facts. No doubt many more of the kind are on record, and a much larger number still, never committed to paper, are for ever buried in the dark womb of oblivion. How, now to account for the martial conduct of a monkish community, which at first sight is entirely incompatible with the spirit of their creed, the very first and most holy commandment of which strictly forbids the shedding of blood, even of the smallest animal?

It is most natural to look for a solution of this question in the books of law of the Church itself. If you visit a monastery in the empire, and ask the inmates which are the precepts on which they frame their religious conduct, in order to insure advancement on the way to salvation and final deliverance, the first answer always is that they chiefly have regard to one book of commandments only, *viz.* the 梵網經 *Fan-mang-king* or "Sutra of Brahma's Net." Whoever, it is said in theory, conforms himself accurately to the ten principal and the forty-eight minor commandments laid down in this little book, he shall naturally become a bodhisatwa, that is to say, a member of the class of beings which is second to Buddha alone. For according to the doctrines of the Mahâyâna school, a school that has always been preponderant in China, the bodhisatwas enjoy the highest

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[8] WYLIE, *Notes on Chinese Literature*, page 124.

[9] 史記言崇禎中舉人，遷知陝州，陝當賊衝，記言出私財募士，聘少室僧訓練之.

state of bliss accessible to them, a state lying on the very verge of buddhaship.

The *Fan-mang-king*, or *Brahma-jâla-sûtra*, has always preponderated in China as the chief code of law of the Mahâyâna school. Tradition uniformly attributes its introduction into the empire to Kumâradjîwa. Relying, it appears, on the sole authority of 僧肇 Sang-Chao, a contemporary monk of great ability and learning, the authorities all assert also, that the great apostle drew it from a much larger Sanskrit work of the same name, containing no less than 112 chapters; the rest were never put into a Chinese garb at all, nor has the original work ever been unearthed by European Indianists. Mr. GRIMBLOT has, indeed, published a "Brahma-jâla-sutra" amongst his "Sept Suttas Pâlis" [Paris 1876]; but this work turns out, on close examination, to have nothing in common with our Chinese Mahâyâna code, except the title. We have found the Chinese version of GRIMBLOT's Pâli text in the 14th chapter of the 佛說長阿含經 *Dîrghâgama sûtra*, under the title 梵動經 Sutra of Brahma's Movements, which would in Sanskrit be "Brahma-jâla-sûtra." [10]

Turning over the pages of the *Fan-mang-king* we forthwith fall in with the following leading commandment, placed at the very head of the whole series of fifty-eight:—

"Buddha said: If a child of Buddha kills, or tells another "to kill, or provides another person with the means of killing, "or expresses himself in terms of praise of a murder, or feels "delight at seeing the perpetration of a murder;—further, if "he kills by means of spells, imprecations or incantations, or "is the cause or occasion, the means or instrument of a "murder (in any of these cases he is *pârâjita*). Anything "endowed with life, thou shalt not wilfully kill. Indeed, a

[10] A complete translation of the *Fan-mang-king*, prepared by us, with an elaborate sketch of its influence on the church and the laity, is now going through the press, and will appear next year in the Transactions of the Royal Academy of Sciences at Amsterdam.

"bodhisatwa should awake in himself everlasting feelings of "pity and commiseration, and, with submissive and obedient "heart, avail himself of every fit occasion to save and protect "all living beings; but if, on the other hand, he should give "freedom to himself to murder with an easy mind a being "endowed with life, it is a bodhisatwa's crime entailing "*pârâjita*." [11]

Pârâjita means "expulsion," to wit, from the Sangha, or the communion of saints embracing all human beings who aspire to the highest holiness, with the dewas, bodhisatwas and Buddhas. Any one who violates one of the first ten commandments of the *Fan-mang-king* is *pârâjita*, *i.e.* "he is cast out beyond the limits of the sea of the Buddhas" (棄佛海邊外), he loses all prospect of ever being saved, and is reduced to one of the three lower paths of transmigration, which embrace the infernal beings, the hungry ghosts (*prêtas*), and the animals.

Around the above highest commandment of the Church are grouped a series of others, likewise tending to prevent destruction of life. The 3rd of the minor commandments interdicts the use of all animal food; the 12th prohibits dealing in cattle; the 32nd keeping dogs or cats, as these animals are always seeking to destroy rats. Possessing or selling sharp weapons, nets, or snares is forbidden in Nos. 10 and 32. The 33rd commandment does not even allow a child of Buddha to look at armies, regiments, warriors, commanders, robbers, or rebels, and the 11th runs thus:—

"If thou art a son of Buddha, thou shalt not, for the sake "of gain or food, or out of depravity, carry messages for a

[11] 佛言, 若佛子, 若自殺, 教人殺, 方便殺, 讚歎殺, 見作隨喜, 乃至呪殺, 殺因, 殺緣, 殺法殺業, 乃至一切有命者不得故殺, 是菩薩應起常住慈悲心, 孝順心, 方便救護一切衆生, 而反自恣心快意殺生者, 是菩薩波羅夷罪.

"state. When armies and regiments meet, and troops are "raised to fight against one another, immense numbers of "living beings are slaughtered; hence a bodhisatwa is not "even allowed to set foot in an army, neither to move to "and fro between armies—how much the more is he then "forbidden to rebel against the state. He who wilfully does "so commits a defiling sin of the lesser category"[12]—that is to say, a sin of a deep dye, but not entailing *pârâjita*.

Having thus shown that the supreme *lex scripta* of the Buddhist code is as explicit in forbidding bloodshed and warfare as it could possibly be, we have now to bring forward evidence that there are also plenty of elements in it to prompt the clergy at any time to occupy themselves with the bloody work of arms. We have such an element in the very first instance in the general spirit of devotion to all living beings which reigns supreme in the Mahâyâna community, and is brought to the front on every page, nay, in every line of the *Fan-mang-king*; in fact, if we were to pass in review all the passages referring to it, it would be necessary to translate the whole 58 articles.

Though forbidding, on one hand, the bearing of arms and the shedding of blood, that spirit of devotion culminated, on the other hand, in peremptory commands to save all living beings, even animals, from death, and to take all the misery, that could befall them, upon one's self. "If thou art a "child of Buddha," so says the 20th commandment, "then "perform the work of liberating living beings for the "sake of commiseration. Any male person is thy father, any "female person thy mother—in fact there is nobody from "whom thou hast not received thy life in the course of the

[12] 若佛子不得爲利養惡心故通國使命,軍陳合會,與師相伐,殺無量衆生,而菩薩尚不得入軍中往來,況故作國賊,若故作者犯輕垢罪.

"successive periods of existence thou hast passed through. "All living beings of the six paths of transmigration[13] being "thus thy parents, thou murderest thy own father and mother "if thou killest or eatest any of them, and also thy ownself of "former times. Therefore, always perform acts of saving "life, as receiving life through a continuous chain of existences "is the everlasting law. Also, exhort others to save living "beings from death; and when thou seest a person of this "world attempt to murder an animal, then thou shalt by all "means save and protect it, and deliver it from its misery and "distress."[14]

This article is also important as giving an insight into the ideas underlying the Buddhist doctrine of respect for life, and affords the whole clue to the solution of the question under discussion. Bearing in mind that in the Flowery Kingdom, as amongst savage and semi-savage peoples in general, warfare has always been simply the greatest destruction of human lives imaginable, no exceptions being made for either sex or age; and considering moreover that, in times of war, no third alternative is left the people, they must either suffer death by the sword or death by starvation in a country completely laid waste, it can not surprise us to see Buddhist zealots, with the said article of their law in their recollection, unite in regular bands to check the raids of rebels and stay the shedding of blood by keeping them beyond the borders of their parish. It could not occur to them that the prohibitions against the carrying of arms were made in order to neutralize

[13] Dêwas, men, asûras, infernal beings, prêtas, and animals.

[14] 若佛子,以慈心故行放生業。一切男子是我父一切女人是我母,我生生無不從之受生,故六道衆生皆是我父母,而殺而食者卽殺我父母,亦殺我故身。故常行放生,生生受生常住之法。教人放生,若見世人殺畜生時,應方便救護,解其苦難.

that highest commandment of the law *to save life on all occasions, and by all possible means.* Where thousands of innocent people could be saved from certain destruction by killing a comparatively small number of slaughtering enemies, the question how to interpret the law would not trouble their minds very long. Moreover, had not the great Indra, the highest dewa of their Church, set an example by destroying numberless hosts of *maras*, those sworn enemies of universal peace and order, who were continually collecting together to harass *Dewas*, men and Buddhas in endless conflicts?

So we see, how little the Buddhist monks cared for the letter of their law, and how much stress, on the contrary, they laid on its spirit. But there were more commandments in their religious code prompting them to place their own lives at stake in order to save those of others:—"A bodhisatwa "must take upon himself all outrage and injury that could be- "fall any living being whatsover; the evil he meets he must "himself cheerfully bear, the good he must resign for the benefit "of others."[15] They may even have been stirred up many a time to the fanatical throwing away of their lives in defence of the hearths and lives of their parishioners by the following commandment (No. 16), embodying the highest ideal of self-sacrifice for the sake of others: "Even to starved tigers, "wolves and lions, and to the whole host of hungry ghosts "thou shalt entirely throw thy own body, flesh, hands and "feet, in order to feed and nourish them."[16]

Two virtues ever stood foremost in China amongst all ethical principles, *viz.* 孝 *hiao* and 順 *shun*, or implicit submission, respect and obedience to all persons in authority, from the

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[15] 菩薩應代一切衆生受加毀辱,惡事向自已,好事與他人—the seventh great commandment.

[16] 乃至餓虎狼師子一切餓鬼悉應捨身肉手足而供養之.

emperor down to parents and teachers. The *Fan-mang-king* also lays the utmost stress upon these, preaching them with great emphasis over and over again on every page. Consequently, it is not to be wondered at that the book in the hands of the votaries of the Buddhist law should have played the part of a magnifying glass which caused the two ancient native virtues to swell into a peremptory order to support the throne of the father and mother of the realm, even at the cost of their blood and lives. No doubt we have here one of the manifold reasons why Buddhism has found very great favour in the eyes of many emperors, and why imperial donations of large tracts of land to monasteries and convents are frequently recorded in the annals of the empire. Indeed, many a statesman must have naturally considered it an act of political foresight to create all over the realm powerful settlements of loyal subjects, which, in times of danger, could be quickly turned into strongholds, garrisoned with soldiers entirely devoted to the imperial cause, and resolved at all times to sacrifice their lives on patriotic grounds. It might, of course, occur to those ecclesiastical warriors in some single instances to enlist under the banners of the opposite party; but in times of rebellion there is sure to be some diversity of opinion on the question *who* is the lawful heir to the throne.

A last reason for the warlike behaviour of Buddhist monks we see in an imperative order of the *Fan-mang-king* to all devoted Buddhists to afford protection to the Sam-Pao, or the triad embracing the Buddha, the Law and the Priesthood. No one, says the book, can ever hope for the Bodhisatwa dignity, unless he conform in every respect to this most holy duty of all Buddha's children. Now, defending the Sam-Pao is identical with protecting monasteries and sanctuaries against hordes of invaders and rebels, who, as is fully proved by the history of all periods, have never manifested one whit

more clemency for religious than for secular buildings. Indeed, when a convent is destroyed, the Buddha to whom it was dedicated comes to grief, because his worship is suddenly brought to an end; the Dharma suffers also because preaching and printing tracts come to a violent standstill; and, finally, the Sangha have a very bad time of it, owing to their being bereft of the home which not only afforded them food, raiment and shelter, but also the opportunity to work themselves up to perfection and salvation.

NOTES AND QUERIES.

Mr. E. H. PARKER, in the *China Review* [vol. XX, pp. 1–24 and 71–100] gives what he calls a history of the Turko-Scythian tribes, translated apparently mainly from the *Hou Han Shu*. There was scarcely any need to introduce here a new title, and Mr. PARKER, it may be remarked, throughout does injustice to his subject by introducing names for which there is no authority, as *e.g.* Huns for Hiung nû and Tunguses for the Chinese 東胡 or Eastern Tartars. *The History of the Hiung nû*, Mr. PARKER is probably unaware, has already been translated for the Anthropological Society[1] by the late Mr. ALEXANDER WYLIE, and Mr. PARKER's translation can hardly be looked upon as an improvement on that veteran rendering. Who the Huns of the European writers were we have yet no certain knowledge; it is quite possible that the Hiung nû, after their defeat by the eastern tribes, did join with allied tribes in their inroads into Europe, but there is an unfilled hiatus of a century, and certainly there is no etymological connexion between the two. The appellations by which the Chinese borderers were known, 戎 Jung or 奴 Nû, both point to an original Nûr or Niru; while the prefix K'iang, K'iüen or Hiung, taken in connexion with the form 陰戎 dark Jung, by which they were likewise known in the Tso chwan period, point to the sound kara black. It is also to be remarked that during this period there were other tribes known as White and Red Tik. Niru in modern Turkish means "strength," and some modification of this was the term used by the people in naming themselves.

The *Hou Han Shu*, quoting from the *Shi ki*, says that under the Shen yu Maotun the Hiung nû had extended their dominion to

[1] *Journal Anthropological Inst.*, Vol. II, No. III.

its widest limits. On the north they controlled the Northern Yi tribes, and on the south contended on equal terms with China. The *Hou Han Shu* then gives the titles of the principal offices. The family name of the Shen yu (I quote WYLIE) was 攣鞮 Lwanti, and his national designation 撐犁孤塗 Ch'ang li kut'u Shen yü. Ch'angli in the Hiung nû language signified "Heaven," and kut'u was "Son," while Shen yü expressed "Majestic Grandeur." The whole, he adds, implied the Shen yü comparable to Heaven. This passage does not occur in the original *Shi ki*, and there is probably good reason for its later introduction. The Chinese language was during the period of the early Hans in an unsettled condition, and with the consolidation of the Empire was acquiring its modern form. The older history indeed states that the Hiung nû chief was called the 單于 Tan yü, which later we are told was to be pronounced *Shen* yü. The old form stood for Tängri or Tängri light, but as 于 *gri* seemingly became softened to *yü* it was looked upon as the rendering of *tenvir* (brightness, light).

Taking up the *Shi ki* again, the principal officers of the Court are described as below.

1°. The Left and Right Hien wang, Faithful princes, 賢王.

Regarding these we are told that in the speech of the Hiung nû Hien was 屠耆 T'u k'i. This is pure Turkish; Dogru meaning "strait; faithful, true." Hence we are told the heir to the throne was always known as the left Dogru prince.

2°. The Left and Right 谷蠡 Ku(k)li.

This word, we are told, in the later work, to call 鹿蠡 Lu(k)li; I can't suggest a reason.

3°. The Left and Right Great Generals 大將.

There is no Turkish alliteration here.

4°. The Left and Right Great 都尉 Tu wei.

Possibly Turkish Dâver (prince or judge).

5°. The Left and Right Great 當戶 Tang hu.

This is again Turkish. The word represents the Darkhans of the eastern Turkish courts. These were distinguished officers who enjoyed without question the right of entrance to and egress

from the presence of the ruling prince at all times. The office was hereditary for nine generations, and the bearers were free of assessments of all kinds.

6°. The Left and Right 骨者侯 Ku(h) tu heo.

From the Left and Right down to the Tang hu the greater were knights assessed at "ten thousand," the lesser at one thousand or more; in all there were twenty-four, all called knights of ten thousand; the greater offices were hereditary and of 乎衍 Hu yeu (kerûn or noble) families; then came the 闌 Lam families. [This is evidently an error, the *Cheng yi* stating on the authority of 顏師古 Yen Sze ku, that Hu yeu now is a clan name amongst the Sien pi [*see below*] and that the Hu yen and Lam are both family designations, apparently only different transliterations of the same word kerûn.] After them came the 須卜 Sü pu(k) (Sherîf or honourable) families. The *Hou Han Shu* adding that the Hu yeu and Sü pu families constantly intermarried with the Shen yüs. The Left officers were stationed in the eastern, the Right in the western divisions of the land.

Lying immediately east of the Hiung nû and conterminous with them were the 鮮卑 Sien pi or 烏桓 Wu hwan. Although so different in their modern form, the two names contain the same elements. Sien pi was originally Ush-var, while Wu hwan resolves itself into U-swar. The original name of the tribe then was Usuri, which still survives in that of the great river which, rising on the north-western flanks of the Ch'ang pai shan, drains the eastern part of Manchuria and debouches into the Amur. According to Gabelentz [*Mandschu-Deutsches Wörterbuch*] Usuri was still in the days of the present dynasty the name of a Manchu clan [Name eines Stamms der Mandschu], having thus survived the wear of some twenty centuries. In the 5th century Klaproth places in these regions the 室韋 Shih wei, which is simply a modern transliteration of the same word.

Another nation, over whose history and connexions what we may call without disparagement the fascinating romance of Gibbon has thrown a mist, is the fair-complexioned and blue-eyed race of the

有氏. Before Anthropology was in any sense a science we do not wonder at an author so careful as GIBBON believing in the possibility of a people changing their most characteristic racial peculiarities under the influence of climate. He speaks of the Euthalites or Nephthalites, otherwise the *white* Huns, as a colony of the Hiung nû who established their dominion in the "fruitful and extensive plains of Sogdiana." "Their manners were softened and even their features were insensibly improved by the mildness of the climate and their long residence in a flourishing province." "The white Huns," he adds, "a name which they derived from the change of their complexions, soon abandoned the pastoral life of Scythia."

This is one of the chapters of *History* that had better never been written. The uncritical mind has a tendency always to reject the kernel of grain in the mass of chaff, and our uncritical Chinese students of the present epoch form no exception to the rule. KLAPROTH [*Tableaux de l'Asie*] has given a series of maps which mark out fairly well the migrations of the Yueti, and the writer [*Trans. of the R. A. S. of Gt. Britain and Ireland*, May 1878] has gone more into details. So far from being an offshoot of the Hiung nû, the Yueti, Haithalah, Ἐφθαλίται or White Huns, for the names are identical, were their bitterest enemies, while their racial characteristics were equally unlike. The history of the Yueti begins before the foundation of the Chinese power. When Wan wang, retreating before the intruding Tiks, as we learn from the *Hwang yi* [*Shi*, III. 1. VII] arrived at Yung, he was attacked by 密 Mieh (Maddh), whom he defeated. The *Tso chwan* [IX, 4] gives us to understand the full name of the people was 密須 Mieh sü, Maddhal, (*dal* being the original form of 須, more late sü). These Maddhs or Maddhals disappear from history till the conquests of Ts'in again opened the road to intercourse. Then we find them as 月氐 Yueh ti, or Viddhals, occupying Central Asia from Lungsi in the west of Kansu to the Pamirs. Here they remained a flourishing people till 177 B.C., when they were expelled by the Hiung nû under circumstances of particular barbarity.

They crossed the passes of the upper Oxus into Bactria, where joining with the 大夏 Ta hia, or Tochars, they founded the empire of the Indo-Scyths, which continued for some centuries a powerful people. Their descendants are still to be found in the elevated table-lands between Merv and Herat.

Another fair-haired race lay west of the Hiung nû, as the latter came into historical prominence; that was the 烏孫 Wu sun, the Asii or Pasiani of the Classical writers. We hear of them first as the Issêdons of Herodotus, living on the east bank of the Jaxartes. They are spoken of as distinguished for their fair hair and blue eyes. There is little doubt that they were a Gothic tribe, Issêdones representing the Gothic West-Saetons and Wu sun, the Wasons or "Dwellers," the name apparently by which they called themselves.

These facts enable us to form some judgment as to the course of events in Central Asia and throw considerable light on the migrations into Europe. The Pamîr table-lands and the adjoining plains have formed not only a water parting for the great rivers of Asia, but also what I may call a *folk-shed* for its people. Some 18 to 13 centuries before Christ this district was inhabited by Aryan tribes; these, tradition Indian, Iranian and Chinese tells us, were attacked and routed, and the survivors dispersed. The Iranian tradition of Jemshid, and Zohâk, the Azhi Dahâka of the Avesta, the Indian of Ahi and Traitana, and the Chinese of King T'ai driven from Pin[2] by the encroachments and exactions of the 狄 Tiks, point to the same irruption of a semi-barbarous tribe of Dahâks or Diks, probably a branch of the great Turkish people, who coming down from the north dispersed south, west and east respectively, the ancestors of the Indian Aryans, the Iranians of Persia, and the Chow tribes of China.

This inroad was followed by many others which have left their marks in the tradition of all three people. In the second century B.C. a similar movement, headed by the Hiung nû took place. As we have seen, the Hiung nû were a Turkish tribe who had

[2] *Mencius*, I. 2. XIV.

probably since the time of the previous dispersion remained on the flanks of the T'ien shan. Impelled by a force from behind, they again acted like a wedge driven in amongst their marching neighbours. Wusuns were driven west, Yueti south-west, Chinese hemmed up on the south-east, and the Tung hu tribes forced east. In all quarters the current of history was altered and the foundation of the modern states of Europe as well as Asia laid.

But the Hiung nû were not alone; behind them in *échelon* lay tribes of Altaic origin, Huns, Samoiyedes, Tunguses, etc., the former inhabitants of the countries watered by the affluents of the great Siberian rivers. These, pushed forward by increasing cold, in their turn pressed on the Hiung nû who, as much forced as forcing, were the head front of those tribal movements which finally, by precipitating on Europe the fugitives from their old seats in mid-Asia, destroyed the Roman Empire.

Mr. E. H. Parker is a good Chinese scholar, and may yet, if he put himself in training, do good service. At present he has one great failing, which mars the usefulness of the work he has assayed; he has unfortunately a deep-seated antagonism to precision of either thought or language. In addition, he has little conception of the rules of evidence, and is apt to take up seriously the most vague and unsupported statements. His philology again is of the ante-Bopp and Grimm period, crude and indigested, while he seldom or never quotes his authorities. He has, I believe, in his new appointment ample leisure to pursue his studies, while new surroundings will doubtless tend to soften down those asperities which have hitherto marked his writings. May we hope to have something better from his pen than his *History of the Turko-Scythian Tribes.*

THOS. W. KINGSMILL.

On making some notes on the condition of the rural population in China generally I was struck with the accounts of Shantung given in vol. xiii, pp. 82-89, which I found some difficulty at

the time in reconciling with other reports. A visit to the regions described seem to throw light on the subject.

The ordinary currency, of western and central Shantung at least, is the *cash*, but a *tiao*, nominally 1,000 *cash*, actually contains only 500. The business of the country is carried on largely in bank notes up to ten or twenty *tiao*, but these are exchangeable for only one-half their face value in actual *cash*, so that it is necessary to stipulate, in making a bargain, whether the money is to be paid in coin or in money of account.

Again the *tael* in common use is the Kuping, and averages 9 per cent. better than the Shanghai *tael* of ·098 alloy.

A *mow*, in the districts mentioned by the Rev. C. S. Meadows, is held to consist of 720 *kung*, the equivalent for what is here known as a square *pu*, so that 2 instead of 6 *mow* are the equivalent of an English acre.

I found the selling price of land in Szechwan district (淄川) varying from 50 to 75 taels per *mow* of 720 *kung*.

Sheo Kwang hien (壽光) was one of the districts that suffered most from the recent famine. Though it possesses in the higher ground some fairly good agricultural land, a large portion of the district consists of irreclamable salt-marsh.

These districts supply a large proportion of the emigrants to Manchuria, but agriculture is of a very low class, and the orchards and mulberry plantations are gradually disappearing. The hills have long been denuded of trees to the serious loss of the lower grounds.

THOS. W. KINGSMILL.

Ancient Use of Wheels for the Propulsion of Vessels by the Chinese.

In the 廿四史通俗衍義, an abridgement of Chinese History, there is a curious passage which shows that wheels for propelling vessels were used in ancient times in China. As I am not aware that the matter has been noticed before, I append the passage with a translation. In the reign of Kao tsung (1127–1163 A.D.) of the

Southern Sung dynasty there was a rebellion near the T'ai-hu lake, headed by a certain Yang Yao. The emperor sent against him troops commanded by Yao Fei, and the historian in describing the final battle gives the following particulars: 么舟以輪激水。其行如飛。旁置撞竿。舟逢之輒碎。飛散腐木亂草於水。以礙其輪。使不得動。遂大破之。么技窮。赴水死. The vessels of Yao striking the water with wheels, went along as if they were flying; they carried poles on the sides to strike and break up any vessels they run against. Fei scattered rotten wood and straw on the water to obstruct the wheels and so prevented them moving. He won a complete victory, and Yao, finding his dexterity of no avail, jumped into the water and died.

Z. VOLPICELLI.

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PROCEEDINGS.

MINUTES *of* PROCEEDINGS *at a* GENERAL MEETING *held at the Society's Library, Museum Road, Shanghai, on Monday, 11th May 1891, at 9 p.m.*

Dr. JOSEPH EDKINS occupied the chair. There were about twenty members present.

The minutes of the last meeting were read by the Hon. Sec., Mr. Mencarini, and confirmed; and it was announced that a paper by Mr. Williams on "Hung Wu and his Capital" would shortly be read, after which the Chairman called on Dr. Macgowan to read his paper, on the "Probable Foreign Origin of the Ass, Sheep and Cat in China," which was as follows:—

Researches into the domestication of animals, as a branch of ethnological inquiry, have long engaged the attention of anthropologists, biologists and sociologists. The following is submitted as a humble contribution to what has been already given by others.

The Chinese in their numerical co-ordination of concrete and abstract nature, consisting of the score of categories in which the "Six Domestic Animals" are comprised, of the horse, ox, goat, pig, dog and fowl, which seems to indicate that when that formula was framed, neither cat, nor sheep, nor ass, had been domesticated in this country.

Observe also that, when familiar beasts were selected to denote years of the duodenary cycle, that to the "Six Domestic Animals" there was added the rat, tiger, hare, dragon, serpent and monkey, to complete the dozen, as if ass, sheep and cat were too little known to meet the object in view, which was the employment of the most familiar representations of animated nature for the duodenary nomenclature. Still more striking is the absence of the ass, sheep and cat

from the twenty-eight zodiacal constellations, which are represented by best known animals. The "Stellar Mansions" contain the six domestic animals, and the twelve animals of the duodenary cycle, to make up the full number for the starry canopy, the badger, fox, leopard, wolf, pheasant, raven, ape, griffon, bat, swallow, porcupine, tapir, muntgak, deer and worm were added.

In the "Cat Parterre" an attempt is made to explain the absence of the cat from the constellations (the author rejecting the modern origin of that animal, was naturally led to seek an explanation) by supposing that as the fox its congener—so considered Chinese—had a place therein, the cat was considered superfluous, but as the monkey and ape, tiger and leopard, dog and wolf, etc. stand side by side in the firmament, his conjecture fails to solve the difficulty. Is not the solution to be found in the subsequent acclimatisation of the ass, sheep and cat? There is ample reason to regard the ass as being absent from the list of domestic animals because it was not an archaic beast. Inconstestibly the hybrid mule is of comparative modern origin in China, dating back only about a score of centuries. Lexigraphically considered the ass is a "black horse," a variety that was considered the most vigorous of the species; its offspring by the horse is written "affiliated horse." A miscellany of Sungaria states that "the mule was not seen during the Hsia, Shang and Chou dynasty; that it was a cross between the ass and the horse from Mongolia=Hunland. It is regularly bred in the north, and is worth in the market twice as much as the horse; it is popularly reported that its bones are marrowless, which is the reason of its inability to produce its kind. Again, it is recorded in a Ming cyclopædia: "The mule is stronger than the horse, and is not a natural product of China; in the Han era it was regarded as a remarkable domestic animal." Is it in the least likely that if the ass existed during the three ancient dynasties, that there was no crossing with the horse? Indeed is it not supposable that the Hun Mongols had not themselves been long in possession of the *Equus Asinus*, but derived it from Mid-Asia, where the animal is found in several varieties in a wild state? I question if any reference to the ass is to be found earlier than in the After Han History, in which we

read of the Emperor Sing [168-189 A.D.] driving four asses attached to his carriage, an act that immediately caused the price of that animal to rise to that of a horse.

Sin-tsen, the famous poet of the middle of the eighth century A.D., gives a picture of a combat between an ass and a tiger in Kweichow, which shows that the two animals were strangers to each other, the ass being an alien. At the first sight of an ass, and hearing it bray, the tiger was alarmed by the novelty, and seemed to look upon the stranger as one about to devour him, but the tiger stealthily approached the donkey, who when near enough boldly kicked the fierce autocrat of the animal kingdom; the kick, however, only seemed to show that the kicker could inflict no serious damage, whereon the tiger seized the offender and made a meal of him.

The above is all that I can lay my hands on to show that China is not the original habitat of the ass; but before dismissing him I will make a few additional statements.

That the black ass which is pictured in the "Imperial Compend" is a bold animal, is shown by the following from a monograph of the Ming period on tigers:

An eunuch possessed a black donkey which he presented to the Emperor; it was able to travel three hundred and more miles a day, and to fight tigers. His Majesty ordered its courage and strength to be tested. A single kick killed the tiger that was set against him; and by three kicks he killed another, when a lion was mercilessly at once pitted against the brave conqueror, whose spine was broken by the lion. Its speed is repeatedly alluded to, confirming what Xenophon in his *Anabasis* says of the wild ass, as swifter of foot than the horse. Take the following anecdote: An owner of an ass in Shensi lent it to his son-in-law. The animal flew, and in a few hours galloped a hundred *li* (33 miles). "Why did you return so soon?" asked the old gentleman. The mendacious young man answered that the beast was of no account and returned after making about three miles. Discovering the uselessness of the animal, he ordered it to be killed; on hearing which the son-in-law hastened to explain that he was only jesting; but the ass was already killed, to

the young man's great chagrin, for it was found to have six kidneys, which showed its capacity for travelling a thousand *li* a day.

[Among references to wild asses, two species are monaceros, which is corroborative of numerous authentic accounts of unicorns, which I have collected.]

The Sheep.

The ancient mode of writing the character for *yang* (goat) was ideographic, four strokes on the top to represent horns, two horizontal strokes representing legs, and a perpendicular one to represent body and tail. The modern form gives an additional parallel stroke like the word for horse; it is a simple, not a compound character, and when sheep came to be known, instead of making a new character, sheep was denominated the Hu-yang ("Hun-goat"), indicating its origin and affinity. *Yang* (goat) is often translated sheep, the earliest instance being found in one of the *Odes*, wherein the Court habiliments of Wen-wang are named lambskins and sheepskins,—*circa* 1160 B.C. But were those robes certainly the skins of sheep? Not certainly, for the skins of goats were used then as now for clothes. Let that be borne in mind, and also the fact that "Hun" goats are not so named before the period of the Tang dynasty,—say the seventh century A.D.* Let it be further noted that the goat was one of the sacrificial animals, as at present; the goat was at the first selected for sacrifice when sheep were unknown. Admitting that in the *Ode* sheep are meant, it merely refers their introduction further up the stream of time.

The Cat.

[Simultaneously with the commencement of Dr. Macgowan's paper on the cat, a loud caterwauling was heard outside the building, which moved the auditors to a general expression of merriment, even the grave President's visage relaxing at the amusing coincidence. The speaker felicitated himself on the interruption, and remarked that it

* A visulcous wild goat described as existing on the mountains of the North-West, which some intrepid successor of Prejvalsky is destined to describe, was simply denominated "Hun goat," indicating its origin.

was not often a lecturer was favoured with such an apt and an opportune illustration of his theme. Subsequently one of the audience suggested that the phenomenon was pre-arranged, as if some hoarse, stridulent coolie had been engaged for diversion to relieve the meeting of natural *ennui;* but another knowing the doctor to be innocent of facetiousness, ascribed the noise to a cat spirit protesting against sheep and donkeys having had precedence while it was dragged into the fag end of the lecture.]

Ignorant as I am of the details of the recent discussion on what has been denominated as the "Great Cat Question" it is not unlikely that sinological lore has already been laid under contribution, and therefore I may have been anticipated to some extent in my researches ; the outcome of which, however, is negative, only leading to the conclusion that the original habitat of the domestic cat was almost certainly west of Eastern Asia. The Chinese name for cat is, as they say, an imitation of the voice of the animal, an instance of onomatope in the same way as the ancient Egyptian word. Inquire of a Chinaman (say in the Chekiang province) why it is the custom to suspend dead cats from tree branches, and he will generally reply that it is to facilitate the departure of the spirit of defunct grimalkin to its distant native country. Consult the "Erh-ya Dictionary," latest edition, and you will find a citation from a standard work which discloses the fact that: Yeün-chuang, the pilgrim monk who, in the seventh century A.D. returned after sixteen years' wandering in India, brought cats with him to protect his collection of Sanscrit Buddhist books from rat-gnawing. That account, however, is somewhat invalidated by the following anecdote of Confucius : Tseng Shen and Min Tzü, canonised disciples of the Sage, were listening outside to the Master's music, who, as was his wont, was soothing himself by thrumming the lute that he loved so well, when suddenly the strain was changed. On entering and inquiring what the change meant they were told by Confucius, that he had seen a cat making for a rat, and that he struck up another tune to stimulate the cat in its attack on the rodent.

These conflicting statements are from authoritative sources, and it is impossible to offer a satisfactory explanation. Possibly the

cat of Confucian times was only a partially domesticated wild cat. [Cases are recorded when the young foxes and wild cats were kept for a time as ratters.] Or the animal might have been a marmot or loris which the *Felix domestica* supplanted, taking its name. Regarded lexigraphically the cat, as the character implies, attacks animals destructive of shoots, as if its sphere was fields rather than houses. There must have been some ground for the statement of the cat having been brought from India; it is hardly likely that in all the long periods of Chinese history it should be named but twice, as a domestic animal once (in the Chou dynasty and once in the Suy dynasty), if it had been the household creature that is so often named in after times. However, I am willing to concede that tabby was a family pet even chiliads ago, while I hold that, nevertheless, it was originally brought to Eastern Asia from the West.

Chinese Cat Lore.

Folk-lorists and cat-fanciers, if no other class of readers, will thank me for selecting from numerous anecdotes from supplementary notes on the "house or family fox," as tabby is denominated by the Chinese Metempsychosis, the part he plays in feline stories.

A monk who was moribund and in debt to his superior, stated that after death he would make recompense in whatever form of life he happened to find himself. One night the abbot saw in a dream an apparition of the departed monk. On waking he found that a large kitten had just been born, weighing over a dozen pounds, which ever after guarded the monastery, intuitively detecting evil-disposed visitors, whom it attacked and bit, doing duty as a fierce and intelligent mastiff,—it was the impecunious brother who, having been born a cat, came faithfully to fulfil the vow he had made as a man.

The Empress Tze [648 A.D.] caused the death of a concubine, who when moribund declared her intention to be a cat in her next birth, whereupon all cats were banished the palace.

Many effects are given of the voice of the cat on rats; for example, a work of the Ming era says that in 1460 A.D. a cat that

was sent as tribute from a foreign state of the West, attracted much attention while passing through Shensi. The bearers of the tribute were questioned concerning the animal; in answer, they said an experiment will explain. The iron cage containing the cat was placed in a room, and on the next morning more than ten rats were found dead before the cage. The keeper then said, wherever this cat is taken rats for more than a mile round will all come to die before it. It is the king of cats.

About 40 years ago there was a cat in Hunan, which, like the cat from the West, had an attractive force which drew rats to die before it. A house where rats were never seen previously was undergoing repairs, when the nest of a cat was exposed, and hundreds of dead rats were found there, who had come to die in the presence of the cat sovereign.

Combats between cats and rats are not uncommon. A work published about 150 years ago gives an interesting account of a cat that displayed remarkable intelligence in a battle-royal with a large fierce rat, which was as large as the cat itself. It killed the best of cats that the country could produce; it infested the palace, and any number of the natural food of the rodent was of course procurable. Finally a cat, white as snow, was sent as tribute from a foreign kingdom, which was shut up in a room where the rat was expected to appear. Courtiers, observing from the outside, saw the rat emerge from its hole. The cat was sitting; the sight of her enraged the rat. He rushed towards her; she jumped on a table; the rat immediately clambered up after her, whereupon she jumped to the floor; he followed; she ascended again, and so led him a dance. The courtiers thought the cat was frightened, but it was merely her tactics. After the rat had got up and down about a hundred times he got thoroughly exhausted. Observing the condition to which she had brought her prey, the cat seized him and gnawed his head, both animals making a great noise. The courtiers now entered and found the rat had been gnawed to death.

A work of the reign of Chien Lung [1723-35] contains a graphic account of a conflict between a colossal rat and a champion cat. A granary contained a great rat that had killed all the cats that had

been bought for its destruction, until a trader from the west of China offered to sell, for Tls. 50, a cat which he guaranteed would destroy the rat. On being placed in the granary the cat concealed herself in the grain; the head only being exposed. She was unperceived by the rat, which she allowed to exhaust itself by exercise, then she seized it, and held her grip during the whole day, till her victim died, but she also died. The rat was found to weigh 30 catties (about 40 lbs.)

Cats are sometimes credited with great attachment. A work of the Sung dynasty gives an account of an occurrence at Nanking as an illustration. A man and his wife who were reduced to abject poverty, and involved in debt, determined to commit suicide, first taking their last meal together; but when the viands and liquors were before them, they had no appetite, so strangled themselves fasting. Their cat did nothing but cry, refusing to touch the food, and starved itself. Another recent work tells of an analogous case in the same city. An aged concubine, in a family of note, made pets of cats, having no less than thirteen of them, whom she treated as children; each had its name and would come when called. In 1776 she died in her 70th year. Her thirteen cats cried by the side of her coffin. They refused their favourite fare, and on the third day all were found dead.

In like manner the cat of Mr. Cheng, of Taiwo, refused to leave his coffin and died seven days after her kind master's death.

Instances are recorded of cats and rats fraternising. In 774 A.D. there was found in the house of a soldier a cat and rat occupying the same place together, living in harmony. His general put the happy family in a cage, and presented them to the Emperor, whereupon a minister congratulated the Emperor on the auspicious event. But another Minister contended that it was unnatural and ominous of evil. A common proverb says:—"Venal officials consort with thieves."

A Tang author refers to a similar case in Honan in 661 A.D. He likened the cats to mandarins who made no attempt to arrest offenders. In 1195 A.D. a cat was observed in Kiangsi followed by ten rats, for whom she procured food. Some one killed the cat,

when the rats lapped her blood. Perhaps the most interesting, psychologically at least, was the information this author communicated on the subject of "cat delusions" prevailing epidemically. At the commencement of the Sui Dynasty [A.D. 581] the cat spirit inspired greater terror than the fox did subsequently. The hallucinations of cat spirit mania prevailed, forming a remarkable episode in Chinese history, only to be likened to the fanatical delusion of witchcraft that frenzied Europe a thousand years later. It was believed that the spirit possessed the power of conjuring away property from one person to another—from an irreverent unbeliever to a pious devotee—inflicting through incantations bodily harm. Such was the universal opinion. By a concurrence of several striking cases and exaggerations, the popular belief was intensified and spread like an epidemic, until every disastrous affair that took place was ascribed to cat spirit agency set in motion by some mischievous enemy. Accusations were lodged against suspected persons, and, the slightest evidence sufficing for conviction, the malicious were encouraged to trump up charges against the innocent, until the country became a very pandemonium. No one was safe, from the imperial family down to the humble clodhopper. Even a magnate of the reigning house, who enjoyed the titular distinction of Prince or King of Sze-chuan, was executed for nefariously employing the agency of cat spirits. In this manner several thousands were immolated before the delusion was dispelled. Happily the period appears to have been of brief duration; incentives such as kept up the witch mania for centuries were wanting in China. Coming down to our own times, we find a cat-craft delusion prevailed over a great portion of Chekiang. "In the summer and autumn of 1847 frightful wraiths appeared throughout the departments of Hangchow, Shao-hsing, Ningpo, and Taichow. They were demons and three-leagued cats. On the approach of night a fetid odour was perceptible in the air, when dwellings were entered by something by which people were bewitched, causing alarm everywhere. On detecting the effluvium in the air, householders commenced gong-beating, and the sprites, frightened by the sonorous noise, quickly retreated. This lasted for several months, when the weird phenomena ceased,"

Well did he remember, said Dr. Macgowan, the commotion that prevailed in Ningpo throughout those months of terror. Every gong that could be procured or manufactured for the occasion was subject to vigorous thumping through the livelong night, maintained with vociferations by relays of zealous beaters. This deafening din was but a recrudescence of what had occurred a few generations before—a panic which was only exceeded by that which subsequently prevailed over the entire empire.

Dr. Macgowan omitted, for want of time, numerous ancedotes on superstitions respecting cats, they being, like the fox, subject to transformation ; their use as food ; their use in the *materia medica ;* their use as chronometers ; their attachment to places rather than persons; retribution for cruelty to cats ; various breeds of cats ; deformities of cats ; etc., etc.

The CHAIRMAN said:—The subject introduced by Dr. Macgowan in the paper which he has now read takes us into the history of three domesticated animals. They belong to the history of man because they have lived with man, and while under his protection they have ministered to his comfort. This subject becomes specially interesting because it belongs to the past of Asia and may be illustrated from a geological point of view. Asia is the highest and oldest of the continents. The course of opinion in regard to the Atlantic Ocean has decided that the bottom of that sea has never been raised. Asia is therefore presented to us by tradition and science as the first home of the human race and of the animals which take a place in the domestic life of man. Dr. Macgowan's view would cut off the sheep, the ass and the cat from ancient China. Now China being just on the border of the immensely wide grassy plateau of Tartary might be expected to have in a domesticated state all those animals which like the horse and sheep naturally seem to belong to the land of grass as their first home. The swift running animals such as the horse, ass and camel would seem to run swiftly on those high, grassy plains, and all grass-eating animals like the sheep and cow also seem to belong to those same plains as their first home, because there is no part of the world where there is so much grass. Yet it is a fact that the ass and camel appear thoroughly well known to

the Chinese only from the Han dynasty. The ass is mentioned in the *Shan-hai King* [B.C. 300] and in the *Erh-ya*, which belongs to about B.C. 800. It may not be in the Classics, because Chinese writers use a style marked by brevity and cut short their narrative far too much. But it is as Dr. Macgowan stated. We can only certainly say that it was common in China in and after the time of Christ.

A word as to the sheep. Dr. Macgowan has decided to differ from all translators in rendering the word *yang* by "goat" in the Classics. The French and English, the Jesuits, and more modern translators all agree in rendering "sheep" for *yang*. In North China this seems quite suitable, for there sheep are found in every market, and sheepskins are commonly worn by the people in the long winter months. The translators can scarcely be wrong.

These matters evidently need to be made a subject of study. All will agree, after the interesting account we have heard from Dr. Macgowan, that the Asiatic Society may well devote attention to the elucidation of doubtful points in the natural history of the domestic animals.

Gen. MESNY said:—My experience of the cat in Kueichow, and especially at Kueiyang Fu, is that the animal had to be very carefully kept, as beggars were in the habit of prowling around the streets catching cats, which they killed, when caught, ate the flesh and sold the skins to furriers, who cured them and made fur garments of them, such garments being worn by well-to-do people. For that reason cats were rather scarce at Kueiyang Fu. But the cat was generally known and domesticated throughout the whole of Kueichow province, Some people made it a business to rear cats for sale; this was especially the case in Kuangsi and Kuangtung provinces; in the latter province cats' flesh was a regular article of food, but I am unaware since what date or how long it has been so.

As to the origin of the ass, I do not know it, but it is my opinion that the ass has been known to the Chinese much longer than what Dr. Macgowan supposed, as it was very common in Honan, Shantung, and Chihli provinces. In Shantung a kind of medicinal glue called *Ochiao* was made of ass skin and sinews, ages

ago, and is still so made and used. The flesh of the ass is also an article of food, especially at Huaiching Fu, Honan province, where it was corned, and sold as food like corned beef in Europe, and fetched a higher price than beef.

As to the term *Yang jou*, in Kueichow it means goat's flesh, the goat in that province being called *Yang*—sheep being distinguished by the name *Mienyang*—whilst the term *Shanyang*, generally used to denote the goat in some parts of China, was used in Kueichow to denote a small kind of deer, which abounded generally speaking all over Kueichow. The *Shanyang* or deer is regularly hunted for in winter throughout that province, as its flesh affords excellent venison.

The CHAIRMAN :—The word *yang* seems to vary its meaning according to locality. In North China, where sheepskins are commonly worn, *yang p'i* means a sheepskin. Sheep are imported from Mongolia in thousands to feed and clothe the people. In mountainous districts like Kueichow the goat is *yang*, because the goat is more common there. The word *yang* is "sheep" on the plains and "goat" in the mountains.

Mr. A. J. LITTLE observed that in Chungking cats are so much appreciated that they are kept tied up, for fear of their being stolen.

Dr. E. FABER said he had not much to say on the subject. The horse was certainly known and domesticated in China at an earlier period than the ass. The cat was late everywhere. Both ass and cat were designated with Chinese compound characters, not with the most ancient elementary forms (see *Prehistoric China*, in vol. xxiv.) Sheep and goat were both included in the name 羊 *yang*. Two names for cat occur in the *Shi king*, 猫 and 貍. The latter is often confounded with 狸 fox. In the *Erh-ya* 貓 is used for cat. The classifier 153 豸 may have the same meaning. Dr. EDKINS' reference to geology was not conclusive; no fossil remnants of ass or cat had been found in China. If the geological formation in China was favourable to these animals it must be shown *why* it was not so in other countries. Philology could have given better help. The most popular name for cat (*mau*) is onomatopoëtic. The other names mentioned have not yet been scientifically examined.

Cats are eaten in China because their flesh is regarded as of medicinal value, especially in lung diseases. Its effects are said to be similar to cod-liver oil. Cats' meat is regularly sold in restaurants at Canton. Black cats are preferred.

Natural history points to Central Asia as the original home of ass and sheep. The cat may be of China.

The CHAIRMAN:—The word *mau* (cat) certainly seems imitative, and would be an original Chinese word rather than an imported foreign name. This is in favour of Dr. FABER's view, that the cat was always known to the Chinese, and against the view of Dr. MACGOWAN, unless it can be shown that *mau* belongs to a contiguous language.

In replying to remarks that the paper elicited, Dr. Macgowan alluded to the remark of the President (Dr. Edkins), that let one delve however deeply into sinological lore, one would find in presenting it at a meeting of this Society that he had failed to exhaust the subject,—the erudite President would be sure to add something that had escaped attention from others, notwithstanding doubts still existing touching the foreign origin of sheep and cat in China.

Dr. MACGOWAN held to the position of his thesis, to which he himself had not done full justice that evening.

The CHAIRMAN:—In regard to the Chinese word for ass (*lü*) it certainly seems to mean the grinding animal, on account of its being used to grind corn and oil, and to have been named on that account.

The meeting closed with a vote of thanks to the author of the paper, moved by Mr. FRASER and seconded by Gen. MESNY.

MINUTES *of the* ANNUAL GENERAL MEETING *held in the Society's Library, Museum Road, Shanghai, on Monday, 22nd June 1890, at 9 p.m.*

Dr. JOSEPH EDKINS occupied the Chair. There was a good attendance.

The HONORARY SECRETARY (Mr. J. Mencarini) read the minutes of the last meeting, which were confirmed.

The CHAIRMAN:—Ladies and Gentlemen,—I am happy to be able to announce that Mr. N. J. Hannen, of Tokio, whom we expect

soon to arrive here as Consul-General and Judge, will become a member of our Society, and also Mr. J Scheveleff, of Vladivostock. These are the only two new members that have joined the Society during the last month. I will now call upon the Secretary to read the Council's report for the last year. This is the annual meeting.

The Council's report for the year 1890-91 was then read by the Honorary Secretary.

The CHAIRMAN :—Has anyone any business to propose? Perhaps I may just myself mention that the Congress of Orientalists is to meet on September 1st, and the Council having appointed Mr. P. J. Hughes as the representative of our Society, he will proceed to discharge this duty in the Autumn; and I may also mention that all who are prepared to write papers to be read before this Congress of Orientalists, should do so at once. The Treasurer's report, I am told by the Hon. Secretary, is to be taken as read. I think it would be interesting to hear the report, but we are rather short of time to-night,—the magic-lantern will take a considerable time to exhibit,—and therefore if the Society does not object we will take the Treasurer's report as read. The next business now is to elect a Council for the ensuing year.

Mr. DONOVAN proposed that the Council for 1891-92 be Messrs. N. J. HANNEN, *President;* P. G. VON MÖLLENDORFF and J. EDKINS, D.D., *Vice Presidents;* T. BROWN, *Hon. Treasurer;* M. F. A. FRASER, *Librarian;* D. C. JANSEN, *Hon. Curator of the Museum;* J. MENCARINI, *Hon. Secretary;* R. E. BREDON, J. Ritter VON HAAS, R. A. JAMIESON, M.A., M.D., T. W. KINGSMILL, and G. M. H. PLAYFAIR, *Councillors.*

Rev. H. C. HODGES seconded the motion, which, when put to the meeting subsequently, was passed unanimously.

Mr. T. W. KINGSMILL proposed the adoption of the Council's Report; GENERAL MESNY seconded, and the motion was carried.

Rev. Mr. WILLIAMS was then called upon to read his paper on "Hung-wu and his Capital" and proceeded :—

The reign of Hung-wu represents the golden age of Nanking. This city has many times been the capital of either a part or the whole of the empire. During the period of the "Three Kingdoms" [A.D. 221-262] it was the capital of Wu. The Emperors of the

Eastern Tsin dynasty [A.D. 317] also made Nanking their home, and the palace stood on Drum Tower Hill. During the reign of the House of Ts'i [479 A.D.] and again during the Liang dynasty [502-556 A.D.] it was the Imperial residence. But it was not until it fell into the hands of the "Beggar King" that it attained the vast proportions and great magnificence for which it afterwards became celebrated. The period is one well worthy of careful study, and deserves to be better known to the western world. But it is of especial interest to all who are interested in Nanking, because Nanking owes whatever of architectural beauty she has had in the past, and no small share of her prosperity and influence, to the taste, the wisdom and the energy of Hung-wu. China, the oldest Empire in the world, is poorest of all in ancient monuments. Her architecture is not of an enduring kind. Nanking, however, is exceptionally fortunate in possessing so many remains, ruins though they be, of this, the most glorious period in her history.

The literary sources of information regarding this period are plentiful enough. It is true in China, as it was in Israel in the days of Solomon, that "of making many books there is no end." I regret very much that circumstances have compelled me to prepare this paper before completing an examination of the accessible histories. The sketch, such as it is, is based upon information gathered from a condensed history of the Ming dynasty found in the *Rh-shih-sz Shi T'ung-suh (Yeu-i)*, from a romantic history of the same period, known as the *Ying-lieh*, written after the downfall of the Mings by a Fukien man named Tsü Wei, from the official history of the Kiangsu province, and from that of the two Nanking hien districts.

That a beggar should rise from poverty and obscurity to the throne of the Celestial Empire, and receive the allegiance and the worship of so haughty a people as the Chinese, is a fact as remarkable as it is unique in human history. In order to understand how such an occurrence could take place, we must glance for a moment at the condition of China during the closing years of the Yuen dynasty. China did not escape, any more than her neighbours, from the invasions of the nomadic races of Tartary which laid waste

the fairest portions of Asia and eastern Europe. During the Han, Tsin and T'ang dynasties the Chinese were called upon at various times to resist the aggression of these restless tribes. And again, at the close of the twelfth century and the beginning of the thirteenth, under the leadership of Genghis Khan, they ravaged Asia from east to west, pillaging some of the richest and most populous portions of China, India and Persia, and in 1215 the city of Peking was taken, and the five northern provinces submitted to the invader. But it was left for the grandson, Kublai, to complete the conquest of the empire, and he established the Yuen dynasty in 1260 A.D. and reigned for thirty-five years with great wisdom and glory, encouraging literature, undertaking some noble public works, among them the Grand Canal, and extending his conquests among the native tribes south-west and west. Yet the empire established thus auspiciously lasted but a century. Genghis began his career with the declaration that there is but one God and one Grand Khan, though allowing the largest toleration to all forms of religion. His successors, however, were not so wise. They became slavish adherents of Buddhism, and the place was filled with a crowd of lazy monks who flattered the vanity of the monarchs and ministered to their caprices. Gradually the government became disorganized. Crafty priests and treacherous eunuchs usurped every place of power and profit. Corrupt officials, with no care for anything but their own enrichment, oppressed the people and drove them to beggary or crime. Multitudes perished from famine. Sedition, robbery, murder and every disorder afflicted the state. Yet the pampered monarch, living in luxury and idleness, cared for none of these things, but gave himself up to every form of vicious indulgence. Such was the condition of affairs during the reign of Shun-ti, the last emperor of this dynasty, who ascended the throne in 1333 A.D. It was a period of disturbance in Europe as well as Asia, of wars and rumours of wars throughout the world. Edward III of England, young and ambitious, was engaged in laying burdensome and unjust taxes upon his subjects and wasting the money, thus obtained, in fruitless efforts to place Baliol on the throne of Scotland and to wrest from Philip VI of France the crown of that kingdom for him-

self. Clement V had removed the papal throne to Avignon and left the fickle populace of degenerate Rome to occupy themselves with the quarrels of the Orsini and Colonna, while Rienzi, already rising to influence, was preparing to attempt the deliverance of his unhappy country. The warring strength of the Greek Empire was exhausted in civil wars between Andronicus the Younger and his grandfather, while the Turks seized every opportunity to reduce the borders of this impoverished state. In such troublous times, a little more than a century after Genghis Khan had started upon his career of conquest, his descendants both in the East and West were surrendering their power and territory into more worthy hands. The last scion of the house on the throne of Persia sought in vain to stem the tide of Turkish aggression while his abandoned relative reigning at Peking was preparing by a life of shame for that cowardly flight before his exasperated subjects which ended the reign of the Tartar dynasty in China. Shun-ti was but a puppet in the hands of his ministers; a weak prince, without resolution or fixed principles, responding to the suggestions now of this one and then of that, according as circumstances placed him under the influence of the one or the other. Had he been surrounded by wise and patriotic ministers, he might easily have avoided the doom which threatened his house, and the "Bright" dynasty might never have been born. As it was, with apparently but one exception, all his councillors sought simply to advance their own interests without any regard to the welfare of the state, and were careful to secure their places by catering with all assiduity to the vices of their lord. One of these ministers, with the significant name of Sa-tun advised the young man to get as much pleasure as he could out of life, repeating a proverb of the day which ran :—

Spring (time) flowers, autumn moon-light!
Miss not thou their joys, O man!
Rosy cheeks and raven tresses,
Faded once, come not again.

The verses remind one of Herrick's lines :—

"Gather the rose-buds while you may,
Old time is still aflying;
And this same flower that smiles to-day
To-morrow will be dying."

Such advice the monarch was only too ready to follow. There was but one man who dared to tell the foolish young Emperor the truth and warn him plainly of the sure results of such reckless living. This minister's name was T'o-t'o. Shun-ti listened to him with all reverence and seemed fully determined to mend his ways, but, chameleon-like, feelings and conduct changed with his surroundings. He desired to please everybody, and T'o-t'o, standing alone for virtue and good government, was out of mind as soon as out of sight. Many of the charges against the Emperor were no doubt false. Rumour exaggerated all his follies, and, once it was certain he was a mere pleasure-seeker, every charge, however extravagant, found ready credence. Native writers enter into minute details respecting his manner of life, drawing largely, no doubt, upon their own prurient imaginations. But "where there is much smoke there must be some flame," and we are justified in believing that vast sums of money were squandered on his pleasures. The Empress one day gave a banquet and, while Shun-ti and the guests feasted and drank, the hall was filled with the soft music of harp, flute and viol and a chorus of girls sang and danced before them.

That night after the Emperor had fallen asleep he was visited, we are told, by a portentous dream. The palace seemed filled with swarming ants and bees, and, though the ministers tried, they failed to sweep them out. Suddenly a man from the south, clothed in red raiment, bearing the sun on his left shoulder and the moon on his right, with a broom in his hand, entered and cleared the palace in a moment of the infesting insects. "Who are you?" asked the astonished Emperor. This strange visitor made no reply but drew a sword and, driving the frightened monarch from the palace, shut the door in his face. He called aloud for help and was awakened by his own cries. Trembling in every limb and bathed in cold perspiration, he summoned an attendant and inquired the hour. "Three points after third watch," said the attendant. The Empress being aroused asked what was the matter, and hearing the dream related, said: "We do not know whether it bodes good or ill; to-morrow we will call an interpreter." Scarcely had she spoken when a frightful noise was heard "like the sound of thunder in the

early spring or that of a falling mountain in an earthquake." An officer was at once sent to inquire the cause, and returned saying that a corner of one of the palace halls had fallen, exposing a great hole in the earth. After court hours next morning the Emperor summoned an old councillor, named Chi-ch'ung, and told him the dream. He interpreted it as an evil omen, saying that the red dress indicated the stranger's name to be either Chu or Ch'i, and the fact that he carried the sun and moon on his shoulders meant that he should attain to imperial power. He therefore urged the Emperor to reform his habits and to correct the evils of the government. The Emperor very naturally did not enjoy the interpretation, but he proceeded to describe the catastrophe which had happened at the "Hall of Pure Virtue." The old man led the way to examine. They found an opening (in the ground) ten feet long and five feet wide, from which a black vapour arose, obscuring the sky. T'o-t'o recommended that a prisoner already condemned to death should be sent for and lowered into the pit to seek the cause of this phenomenon. Such a prisoner was found and, on being promised full pardon, consented to descend into the opening. After some time he was drawn up and brought with him a tablet bearing twenty-four characters forming an ominous sentence to this effect:—

"Calm Heaven above is free from care,
The wide-wide world is filled with war;
Behold in South and East afar
I see the flashing sword and spear.

Yuen, alas, must pass away,
The sun and moon with wedded ray
Shall usher in the brighter day
When Peace the East and South shall sway."

But with characteristic Chinese reasoning the Emperor, as though the word "Yuen" were to blame for all the ill luck, said: "Well, if the style 'Yuen' must be changed there is no help for it; we will establish a new style; 'all under heaven' will then be protected, and what further trouble can there be!"

His minister mildly suggested that the character of the monarch needed to be changed rather than the Imperial style, but agreed that the style could be changed if he so desired.

This is a very good illustration of ordinary Chinamen's conception of sin and repentance. It is difficult for a Chinaman to get beyond externals. Sin is the neglect of some form or other. This neglect brings ill luck, and the way to avoid the ill luck is to observe certain other forms. While the conversation proceeded the opening in the earth suddenly closed of itself, filling the beholders with awe. The convict was pardoned and released; the tablet was hidden and the company dispersed. The next day the Emperor ordered the style of his reign to be changed to Chi-chung, as though by changing the name he could avoid the doom pronounced upon his house.

The significance of the dream and the omen are of course very easily understood. The ants and bees that swarmed in the palace represented the rebels and robbers that everywhere infested the empire. The feeble efforts on the part of the officials to suppress these disorders were all in vain. But there would come a red-robed man, that is, a man named Chu (which was Hung-wu's family name), who would sweep them all out, it was promised, and drive the monarch from his throne. The bearing of the sun on the left shoulder and the moon on the right was meant to be a prophecy of the Ming dynasty, the characters for sun and moon written side by side in this position forming the character "Ming," or bright. It is true that Shun-ti did change the style of his reign in the fifth year to Chi-chung. The fiction of the dream is a very clever prophecy of the rise of the Mings, invented of course after the event. The figure of swarming ants and bees not inaptly represented the condition of the country, which was filled with bands of robbers and rebels, while the officials who plundered the people in the name of the state were worse than the bandits. The people in many places were compelled to organise themselves in self-defence.

As a matter of course we have a multitude of marvellous stories of unusual phenomena, strange omens sent by Heaven to prepare men for impending calamities and a change of dynasty; for such a change must be heralded by at least a report of supernatural occurrences, else the common people will be unwilling to transfer their allegiance from the old to the new. Hence we are told that about this time at Peking chickens were changed to dogs and sheep into

cattle; at Nanking brass and iron of themselves emitted sound; at Kaifung Fu variegated flowers appeared upon the surface of the river, as if painted there, and remained three days, when they disappeared; at Hangchau globes of fire appeared upon the river; in Shantung it rained white hair; in the west were earthquakes, lasting a hundred days, and at Canton the walls of a *yamên* fell down revealing five hundred crossbows, each nine or ten feet in length, which no one was able to bend. In the heavens, too, were frightful portents; long-tailed comets, and falling stars, which when they struck the earth were changed to stone images of dogs' heads. Letters came to the capital like snowflakes in number, but wicked ministers destroyed them, and the pleasure-loving monarch lived on in utter ignorance of the volcano slumbering beneath his throne.

One of the most successful of these rebellious uprisings had its origin in the village of White Deer, situated on the Hwai river in Ying Chen, North-western Anhwei. It is said to have been a beautiful spot, diversified by picturesque hills and quiet dales, green fields and shady groves; the clear shallow river murmured over its pebbles, and the white deer herded in the coverts. It happened one day that an insolent official passed that way and was charmed with the beauty of the place, exclaiming: "This is certainly a retreat fit for gods, men and genii." He at once sent his followers to demand a certain piece of ground, where he might build for himself a country residence and pleasure-garden. But this place belonged to a young giant named Liu Fu-t'ung, who stood in no fear of officialdom and who, as soon as he heard of the outrageous demand, seized a spear and rushed upon the underlings, who were glad to escape with their lives and were barely able to rescue their lord himself from the hands of the infuriated peasant. The said official strutted and fumed over his loss of dignity and vowed vengeance upon the whole village. "Am I not Kia-lu?" he said. "Where is the place to which my fame has not penetrated? And am I to put up with this treatment from such a fellow? I will wipe this place out of existence." On his return to Peking he represented to the Emperor that the Yellow River was silted up and needed opening, and requested permission to undertake the work. I judge from this

account that formerly, perhaps a great many years previous to these occurrences, the Yellow River must have flowed to the sea through the channel of the Hwai, but that it had afterwads broken through its banks and taken a new course, probably that which it kept up to some thirty-five years ago, and that Kia-lu proposed to restore it to its old channel, that is, the bed of the Hwai. You will notice on the map that the head-waters to the Hwai reach nearly to Kai-fung Fu where two years ago the Yellow River broke through its banks to flow south-east. At any rate there was a proverb current at the time which said:—

"A stone man with one eye—
Open the Yellow River and the Empire will rise in rebellion."

When Kia-lu asked permission to open the river, he knew of this saying, but forestalled any quotation of it against himself by perverting it in his favour saying: The people say: "A stone man with one eye, if you don't open the Yellow River, the empire will rise in rebellion."

"But," said the Emperor, "yesterday, when I proposed to my ministers to open the channel of the river they all said it could not be done because the people say: 'A stone man with one eye; open the Yellow River and the empire will rise in rebellion.'" Kia-lu, however, was a man of ready tongue and replied: "Don't listen to such speeches; if river and canal are not navigable there can be no rice transported to Peking, and if the people have no rice, will they not rise in rebellion?" This seemed reasonable. Orders were given to commence the work at once and to behead the first man that opposed. Kia-lu thus equipped went to White Deer and ordered the channel to be cut right through the property of Liu Fu-t'ung, and turned this fiery young giant with his family out into the street.

In the same village was a man named Han Shan-tung, falsely said to be a Buddha, who with Liu Fu-t'ung organised a secret society whose members wore red caps and white girdles. These two men greatly imposed upon the people by the practice of pretended magic, and when Liu Fu-t'ung was driven from his home they raised the standard of rebellion and gathered quite a multitude

of followers. In order to increase their number they bade the sceptical dig in the river and find proof of the righteousness of their action.

They set to work and, before digging a foot, unearthed a stone image of a man with one eye, bearing the inscription: "Open the Yellow River and the empire will rise in rebellion." This was argument enough for those who needed any, and the rebellion soon assumed formidable proportions. Raw recruits, however, are no match for professional soldiers, and in the first fight with the imperial troops the rebels were defeated and Han Shan-tung was killed. Liu Fu-t'ung then took his friend's son and proclaimed him king. Two other prominent rebels were Chi Maw-li in north-western Kiangsu at Tsü Chen and Chang Sz-ch'ung at T'ai Chen near Yangchau. The latter was afterwards bought off by the Emperor and returned to his allegiance. The careless monarch at last began to realise the condition of affairs, and despatched troops to suppress the disorders, but his officers came back wounded and beaten. Assembling his councillors he then asked them what they had to propose. "The ancients," he said, "had a saying 'The poor man seeks a thrifty housewife, and the disordered kingdom needs an honest and a capable minister.'" T'o-t'o offered his services and was accepted. In a short time he had defeated both Chi Maw-li and Liu Fu-t'ung, but his enemies (at Court) jealous of his influence, destroyed his despatches, represented him as wasting time and money in idleness, and succeeded in having him banished, upon which, according to one report, he committed suicide, and according to another was poisoned by the orders of one of his rivals. Chi Maw-li and Liu Fu-t'ung at once recovered their lost territory and prestige on the death of T'o-t'o, and these two rebel forces coming into conflict with one another, Chi Maw-li was defeated and his followers or most of them deserted to the camp of the more successful leader Liu Fu-t'ung, who now ruled through Han-ling, a large portion of Kiangsu, Shantung, Anhwei and Honan. Among his officers at this time was a man named Kwoh Kwan-ching, a maternal uncle of Chu Hung-wu, the founder of the Ming dynasty. We must turn back now for a few moments to the year 1328 A.D.,

four years before the last Yuen emperor ascended the throne. This is the date of Hung-wu's birth. His parents were wretchedly poor and were stopping at the time of his birth in a little village just outside the gates of Fung Yang Hsien, a city then known as Hao Cheu. The present city of Fung Yang Fu was not then in existence, having been built by Hung-wu. The Hsien city, which is situated half-a-mile or more to the west of the Fu city, has still a very good wall and an old pagoda, but the interior is in a very dilapidated condition, the houses being chiefly mud huts, thatched with straw. All the trade of the place has departed to the more prosperous Fu city, which is a well-built place of about a hundred thousand inhabitants. The house in which Hung-wu was born has long since perished, but a temple is erected on its site which is just outside the East Gate of Fung-yang Fu, and at the time of his birth was occupied by a little hamlet known as Chung-li Tung, said to have anciently been the home of a wizard, Chung Li. Great marvel accompanied the birth of the future Emperor, we are told. One remarkable tale tells us that at the close of the year preceding his entrance into this world, when all the kitchen-gods were assembled in the halls of the Yü Hwang, this Emperor of all the gods addressed them and said:—"All under heaven is now in confusion; we must send down another son of heaven for Emperor." The reports of the kitchen-gods were then heard, and it was discovered that the family of Hung-wu's father, Chu She-chun, was the most virtuous of all, and had been storing up merit through many generations. It was therefore decided that the future Emperor should be born in this family, but when volunteers were called for from among the stars, no one was willing to go. The Yü Hwang thereupon grew angry and read them a lecture that caused the two fan-bearers behind his throne (the "Golden Youth" and the "Gem Maiden") to titter aloud and let their fans accidentally fall together. The "Golden Youth" stood on the left, and his fan bore the character for sun, while the Maiden stood on the right with a fan that had the character for moon, so that when they fell together they made the character Ming. The attention of the Yü Hwang being thus directed to them, he said: "I will send

you two, one to be Emperor and the other Empress." Thus we have the assurance of a Chinese historian that the marriage of Hung-wu was one of those matches of which we have heard that they are made in Heaven.

The family of Hung-wu came from Kü-yung, a village some ninety *li* south-east of Nanking. His father, however, was born in Nanking and removed on account of the troubled condition of the times to Chu-yang, north of the river, the present Chiu-cheu. Here one night his house and all his possessions were consumed by fire, and he wandered with his wife toward Fung-yang, then known as Hao-cheu, intending to seek a home with his son-in-law who lived some distance beyond. One evening as it was growing dark he arrived at the gate of the Huan-hsioh-sz, a monastery just outside the gates of Fung-yang Hien, at a hamlet known as Chung-li Si, but a short distance west of Chung-li Tung, mentioned above. Being very weary he and his wife lay down at the gate of the monastery to rest, and were discovered there by the abbot, who inquired their name and circumstances, and very kindly found a lodging for them at Chung-li Tung. The monk further, a few days later, secured employment in the neighbourhood for the unfortunate man, so that he decided to make his home there, and sent for his three sons whom he had left at Chiu-cheu. In this little village, in the ninth moon of the year 1328 A.D. the "Golden Youth" appeared in the family of Chu She-chun, and was given the name of Chu Yuen-lung. He cried for three days after his birth, we are told, to the great annoyance of the neighbours, and was quieted only by some strange words spoken by a Taoist monk who appeared from no one knows where. When he was eleven years of age, his parents being very poor, he was hired by a man named Sin Ta-sin for a herdsman, and sent into the fields to watch his cattle, but he played such pranks that he was soon dismissed. When he was seventeen his father, mother and eldest brother all died, and the family being unable to provide coffins, the future emperor with his two remaining brothers made a wrapping of straw and buried them. Their graves may still be seen some six miles south-west of Fung-yang Fu. After this sad misfortune the brothers scattered and Chu Yuen-lung, not

having any trade, was urged by his father's friends to enter the monastery of Hwan-kioh, which he did, as a servant. It is said that he afterwards became a monk, but this is uncertain, and, as he remained but a short time, is altogether unlikely. This monastery still exists under the name of Sung-shing Sz, just outside the north gate of Fung-yang Fu. The ruins of the old monastery lie scattered all around, showing that it was once a large inclosure. The present buildings are less pretentious but in good repair and contain some relics of the more prosperous days of the monastery. Among them are four large caldrons of bronze, six feet in diameter and six feet deep, the metal being three or four inches thick. There is also a fifth of the same size made of iron. These kettles are now unused, but formerly served for cooking food for the monks. A bell-tower in one corner of the garden contains a large bell cast in the fourth year of Ch'ung-hwa [1469 A.D.]. In the reception-room is a portrait of Hung-wu in his later years. He remained in the monastery but a short time. The old abbot who was his friend having died, and the other monks not having any liking for the young scapegrace, he left Fung-yang and went to Ch'u-yang, or Ch'u Chen as we call it now, to the home of a maternal uncle Kwoh Kwan-ch'ing, and became tutor to his uncle's children, though what he was able to teach them does not appear. Certainly he was more of a servant than a tutor. He ate considerable bitterness while with his uncle, but was very kindly treated by a young slave-girl in the household named Ma, for whom he formed a very strong attachment. It was at this time that he went to Nanking with a wheel-barrow load of plums. A pestilence was raging in this city and the plums were in demand as a remedy. His uncle having accompanied him as far as Ho Chen, got into a quarrel there and killed a man, and was compelled to flee for his life. Yuen-lung (or Hung-wu, as we call him), continued his journey alone and sold the plums for a good sum of money. He did not at once return to Ch'u Chen, and, when he did, he was surprised to find his uncle living in great elegance and unusual luxury. He inquired the cause and learned that, on fleeing from Ho Chen, his uncle had gone to Fung-yang and falling in with Liu Fu-t'ung, had taken service under him and

shown such military skill that he was entrusted with an army for the capture of Chu Chen which was very easily effected. "But," said the nephew, "why wear the red cap of Liu Fu-t'ung? Why not yourself be a king?" This idea greatly pleased Kwoh Kwan-ch'ing, who thenceforth proclaimed himself the Ch'u-yang Wang or King of Ch'u-yang. To Liu Fu-t'ung, who protested, he sent word, saying: "The whole country is in confusion and each district has its king; my right is as good as yours. You rule your territory and I'll rule mine, and in case of attack we will help one another." The newly-made king then appointed his nephew commander-in-chief of the army, who at once proceeded to strengthen it by gathering from far and near the most notable and skillful soldiers to serve as its officers. One of these was Li Shang-chang who afterwards became Chief Minister of the Left, and another was a distinguished gentleman of Yangchau named Ts'u Tah who became in after years Chief Minister of the Right. The latter proved one of the most successful generals of the period. There is a fine portrait of him at Moh-tsen Hu outside the Shui Si Mung at Nanking. He is represented as a large, handsome man, with a rather intellectual countenance and a very gentle expression. His grave may may be seen outside the T'ai-ping Gate, a mile or more on the Chinkiang highway. It is a large mound. An immense tablet, on the back of a tortoise, records his virtues, and the avenue is guarded by several pairs of stone images of horses and other animals.

The inscription on the tablet was written by the Emperor Hung-wu himself, in praise of his faithful and most excellent minister. As soon as the army was in good shape an attack was made on Sz Chuen, which by the treachery of the commander was surrendered without a battle, the traitor being rewarded with a post in the army of the Ch'u-yang king. Being now in a condition to marry, Yuen-lung, with the consent of his uncle, took the slave-girl, for whom he had lost none of his affection, and made her his wife; and a most wise and excellent woman she proved to be, in every way worthy the lofty estate for which fortune had destined her. Shortly after this Kwoh Kwan-ch'ing, the Ch'u-yang king, died, and his nephew was proclaimed king in his stead. He possessed

himself of Ting-yuen and Fung-yang, and having strengthened himself in that region he became anxious to attack Nanking, but had no way of transporting his army across the Yangtze River. Luckily at this time a number of boatmen had organised a fleet for self-protection against numerous bands of pirates that infested the creeks and lakes in the district about Wuhu. These boatmen placed their fleet at the service of the new king who, delighted with the gift, ordered it to assemble on Lake Ch'ao and, there embarking his army, crossed the river, reduced several minor places and captured T'ai-ping Fu. Thence he marched to Nanking. The officer in charge, Ch'ung Yen-san, surrendered and gave in his allegiance to the conqueror, but afterwards rebelled and was beheaded. His son was captured a little later, but took the oath of allegiance to the successful young general, who now changed his title of Ch'u-yang King for the more modest one of Duke of Wu. After entering Nanking he gathered the elders of the city together and said: "I have come because the nation is in confusion; the old rulers are worthless and must go." The people, it is said, greatly rejoiced in the protection promised. But a large part of the population either then or later must have been very disloyal or untrustworthy, for he removed several thousand families to Yunnan and brought twenty thousand other families from Chekiang and Fung-yang to Nanking to take their places. This will explain a rather remarkable occurrence, related to me by Mr. Leaman, that some years ago a missionary from Burmah came to Nanking, who had studied Chinese in Burmah with a teacher from Yunnan. He preached while in Nanking and spoke Chinese with as pure a Nankingese accent as those who had learned the language in that city at the time of its capture by Hung-wu. Nanking was known, however, by the name of Kien-kang. The Duke of Wu was then thirty-four years of age; it was the year 1362 A.D.

Sending an army to Chinkiang, he secured the allegiance of that place and captured several other cities in that region. Another army was sent to Ning-kwoh Fu, the Yuen general (Chu Ziang-tau) in command of which place surrendered and entered the service of the Duke of Wu. Afterwards he rebelled, but a second time

surrendered, and the Duke forgave him his treachery and a second time employed him. He ever acted on this principle, treating his captives with the greatest consideration, and by his kindness sought to win the affection even of those who were opposed to him. Thus he gathered to his side some of the ablest men among his adversaries, in this way not only diminishing the strength of the Yuen force but adding to his own at the same time.

Numbers of places north and south of the river soon fell into his hands, and, in order to relieve the people of the past burdens laid upon them by the support of a large army, he directed that the soldiers when not engaged in active service should be employed in agriculture and thus raise their own subsistence. Having established his authority at Nanking, he made Ts'u Tah commander of the forces in the north, and sent him to subdue the Yuen armies still lingering there as well as various rebel forces in that region. Ts'u Tah defeated the Yuen generals in Nganhwui, Shantung and Honan and drove their demoralized armies beyond the Yellow River. While he was at Teh Cheu the inhabitants of Peking heard of his approach and began to tremble for their safety. The capital was held but by a small force and no preparations had been made for defence. The Emperor Shun-ti, filled with fear, proposed to fly to the north, but his ministers urged him to stay in Peking. This he was too great a coward to do, and after giving certain directions for defence, as though he would remain, fled secretly in the night through the Kien-teh Whong, going by way of Kü-kan Kwan to Sha-mo. Thus ignominiously ended an inglorious reign of thirty-six years. The Chinese reckon to the Yuen dynasty thirteen emperors and a period of one hundred and sixty-two years. But from the final overthrow of the Sung dynasty and the settlement of the kingdom by Kublai Khan to the flight of Shun-ti there was but nine emperors and a period of only eighty-nine years.

The victorious army of Ts'u Tah entered the late capital, beheaded the generals in command and seized all the treasure. The fugitive Emperor did not remain long at Sha-mo, but left the imperial household there and continued his flight towards the sea-coast. Two years later Sha-mo was captured by the Ming army

and the seals, a great deal of treasure, and the women and children of the imperial family fell into their hands. A grandson of the late emperor was taken under the protection of Hung-wu and was afterwards appointed to office. Previous, however, to the fall of Peking a rebellion broke out in Nganhwui, under the leadership of Ch'ung Yiu-liang, who captured T'ai-p'ing, proclaimed himself emperor, and pushed on towards Nanking. The people of this city were filled with terror by the approach of his army, but the ever-victorious Duke of Wu was energetic in his preparations and completely routed the invaders, whose leader fled to Wu-ch'ang. Upon this the Yuen general, commanding the garrison at Nan-ch'ang Fu, the capital of Kiangsi, offered to surrender to our Duke, provided he should be allowed to retain command where he was. This was finally agreed upon and ere the matter was well settled Ch'ung Yiu-liang, who had recruited his forces at Wu-ch'ang and gathered a large fleet besides, moved down upon Nan-ch'ang and laid seige to that city. The Duke, receiving word to this effect, detached as many soldiers as he could spare, and seizing all the boats that could be found, hastened to relieve the garrison, which was very small. But Ch'ung Yiu-liang was on the look-out to prevent the junction of these armies, and by swift marches intercepted the progress of the Duke and attacked his forces upon the Po-yang Lake. But the army of the Duke was inferior to that of his antagonist, who was withal a man of no ordinary ability. The battle raged for several days with no decisive result, when, a favourable wind springing up, the Duke set fire to several of his own boats and burned a large part of Yiu-liang's fleet. Many officers, too, were burned to death. Next day the battle was renewed and continued three days. Yiu-liang, hard-pressed, sought to escape but was shot through the eye and killed. His body, however, was carried off by his son and several officers and taken to Wu-ch'ang, where the son was proclaimed Emperor. About this time (1364 A.D.) the Duke proclaimed himself king with the title Wu Wang. As soon as possible he followed Yiu-liang's son to Wu-ch'ang and laid siege to the place, compelling it in a short time to capitulate. He very generously pardoned the son of his late

rival and liberated all his relatives who had been imprisoned. The young man was persuaded later to accept office under his conqueror.

The only formidable rival now remaining was Chang Sz-ch'ung, whose capital was at Su-chau. This man was originally a salt-trader at T'ai Chen, a shrewd merchant, a rather unsociable man, a man of few words and one who rarely or never laughed, careless of money and fond of charity, but a man cordially disliked by his neighbours. He was moreover a man of great strength. One day, becoming engaged in a quarrel, he killed a bow-man, and as the whole country was infested with gangs of cut-throats and robbers, he and his confederates determined, in order to escape punishment for the murder, to organise a band themselves, which they did, and with which they captured T'ai Chen. Encouraged by his success, Sz-ch'ung proceeded to bolder measures and soon made himself master of a large territory, proclaiming himself the Ch'ung Wang. After he had captured Yangchau and Sz-chen the Emperor sent T'o-t'o to bring him to terms, but T'o-t'o, after defeating him, had been recalled, as usual, and Sz-ch'ung soon regained his lost territory, after which he was brought over by the Emperor and made king over a large part of Kiangsu and Chekiang with his capital at Su-chau. Here he reigned as a tributary prince for four years, gradually growing careless and turning over the administration to other hands. While things were in this condition and his army divided, part being at Hu-chen and a part at Hangchow, the king of Wu, having kept his preparations a secret, attacked and defeated these two forces in quick succession, and marching on Su-chau, captured it. Chang Sz-ch'ung committed suicide, on hearing which the King of Wu professed great regret, as he had hoped after defeating him to attach a man of such great abilities to his own service.

The Emperor having been already driven from his throne, as related above, and the greater part of the empire being now under the rule of the King of Wu, in 1368 he proclaimed himself Emperor with the style Hung-wu, and called his dynasty the Ming. He was then forty years of age. He immediately raised four generations of ancestors to imperial honours, which, seeing they were

all dead, it is to be hoped they duly appreciated. Fukien, Kwantung, and Kwangsi were reduced in rapid succession by various skillful commanders. Ts'u Tah extended his conquests to Shansi, Shensi and Kansu, and "all under heaven," to use a Chinese expression, was now submissive to his will, save Sz-chwan and Yunnan. "Montani semper liberi" is an old Latin saying (Mountaineers are harder to quell than people of the plains), and it was not until the fifth year of his reign that Sz-chwan was subdued, while Yunnan held out until the fourteenth. But without waiting for these conquests Hung-wu proceeded at once to set the government in order and give security and prosperity to the people. The whole empire was divided into nine states, each of which was placed under the rule of one of his sons, who were called kings.

He organized the Six Boards, published the calendar, determined the ritual for the worship of Heaven and Earth and that also for the worship of ancestors. He fixed the strength of the garrisons and corrected the manual for the drilling of the troops. He sought out all those who had fled into hiding during the troublous times which preceded his subjugation of the empire and encouraged them to return to their homes. He paid particular honour to men of letters, and was an earnest and liberal patron of education. He invited the most distinguished scholars to take office under him and ordered the *hiens* to open one free school in each *hien* district, while at the capital he established a higher school or university for the investigation of important branches of learning and the production and preservation of books. The *Hanlin* students were set to work writing, but were cautioned against wasting time on mere refinement of language, mere rhetorical display. He forbade the use of the four-character and six-character vessels and sought to encourage prose rather than poetical composition, as was natural in one of his practical character. He gave titles to the descendants of Confucius and made one of them a *Chihien*. He sent out officers to hold court and adjudicate important cases. He settled the rules to be observed in the examinations, and fixed upon a costume for the people, particularly the graduates. If the drawings in Chinese books correctly represent this costume we must praise the taste of the peasant emperor, for it

was far more becoming than that now worn. It would appear to have been something like the present Japanese costume and was modelled on that of the Tang dynasty with slight changes. It is said that he sought for able men as a thirsty man seeks water. Certain it is that he succeeded in gathering about him a large number of remarkably brilliant men. He encouraged agriculture and the silk manufacture, and among the strange things recorded of him as good works, he forbade pearl-fishing and gold-mining. He released the provinces in turn from taxation, and in unusually disastrous years be remitted all the taxes of the empire. He forbade the eunuchs to interfere in affairs of state, a custom that had led to such scandals in the preceding dynasty. He even forbade their learning to read and prohibited their entrance into the army. Another remarkable rule was to prohibit Buddhist and Taoist monks travelling at will about the country. He would not suffer them to cross the borders of their own provinces without a passport. He allowed but one monastery, too, to each *hien*, and required that it should be inspected once a month. And until the age of forty years was reached he would not allow any man or woman to enter either of these orders. Many of these provisions were excellent, but how many of them were really carried into execution and how many were but dead-letters we cannot tell. Chinamen have always been better at legislation than at the execution of the laws—as is true indeed of all other nations.

When Hung-wu first came to Nanking he occupied the Fu *yamên* of the Sung dynasty near the South Gate. All that remains of it now is the former gateway of the place, at present called the Kiu Wang Fu, and found opening a narrow dirty street near the Examination Hall. It is a favorite resort of opium-smoking beggars. The city of Kien-k'ang, or Nanking, at that time formed very nearly a perfect square. The North Gate stood at th present Peh-mung K'iao, the name itself being a relic and witness of those early days. The creek over which this North Gate Bridge is built formed a part of the city moat, which may be traced up the valley with two or three windings to Han-si Mung. This was the line of the old city wall. From Han-si Mung it followed the line of

the present wall by Shui-si Mung to the South Gate and thence to the angle east of the South Gate. From this corner it ran in a straight line north, instead of bending east again as it does now at the T'ung-tsi Mung, and the canal which now runs north and south on the west of the Tartar city was the moat outside the east wall. The East Gate stood not far from T'ung-tsi Mung, but opening of course to the east and not to the south as the T'ung-tsi Mung does. When at a point due east of Peh-mung K'iao the wall turned at a right angle towards the west, and following the line of the present canal, joined the North Gate and so completed the circuit. At the time the city had but five gates—the North, South, East, West, and the Lung-kuan Mung, identical with the present Shin-si Mung. The Imperial City of Hung-wu, and the "Forbidden City" inclosed within it, were built, therefore, wholly outside the old city wall, just adjoining it on the east. This city, including the Imperial Palace, he began to build in the second year of his reign as Emperor and in the eighth moon. In four years it was all completed. The date of the palace, therefore, is 1374. It has been so thoroughly destroyed that it is difficult to tell what it was like, but a diagram of it is published in the history of the two Nanking *hiens*, which shows it to have formed an extensive pile of buildings. It was roofed with yellow dragon-tiles, some of which can still be obtained. There was evidently a fine garden, as there are remains of an artificial cave and rockery, said to have been a favourite resort of the Empress. Some of the old stone stairways, leading into the various halls, are still visible, with their beautiful carvings. The only building remaining now is the Ping-lung Tong, as it is popularly called, in which tradition says the Emperor was wont to imprison his refractory wives. I do not know the authority for this statement. The building is now used as a powder magazine. It is anything but Chinese in appearance; the walls are solid, made of brick, the form of the building rectangular. Well proportioned windows are set at regular distances in the sides; the roof is gabled but not carved, and there is but little cornice. If removed to England or America it would pass at once for an old-fashioned country meeting-house. A temple on the site of the palace contains

a tablet to the memory of Fung Hiao-su, the faithful secretary of of Kien-wang, who refused to acknowledge Yung-loh as Emperor and dared to call him "usurper" to his face, for which temerity he was slain upon the palace steps hard by. In giving directions for the building of the palace, Hung-wu ordered that all extravagant decoration should be avoided; that everything should be simple and plain. He further directed that a record of the deeds of ancient worthies should be carved on the walls of one of the halls and the text of the *Ta Hioh*. The five bridges at the front of the palace, just inside the gates of the "Forbidden City," were beautifully executed and remain in pretty good condition to this day. The front gateway of this "Forbidden City" must have been especially imposing. There are five gates, opposite the five dragon bridges just mentioned. Three of these open out into a plaza before the gates, while the remaining two, one on each side, open into two flanking walls which extend along two sides of the plaza at right angles to the main wall, and these two passages turning within the walls open on to the same plaza from the sides. These two were doubtless the gates in constant use, as they were easily defended and would afford no view of the interior to curious passers-by. The two protecting or flanking walls, one at each side of the gateway are 158 feet long. On the top of these walls, which are forty feet high, are still visible the bases of the pillars which once supported the lofty gatehouse and watch-tower that extended around the three inclosed sides of the plaza just described.

As you come out of the "Forbidden City" towards the Hung-wu Gate, you will see on your right two or three ancient *p'ai-lou* or portals, and other ruins. This was the imperial execution-ground, used for state criminals. An old stone standing in the centre of a square, whose outline with four gateways is still visible, is pointed out as the execution-block. The road from the palace gate to the Hung-wu Mung, or as it was called in those days the Chung-yang Mung, is straight as an arrow, and is known as the Yü Lu, or Imperial Way, and is paved with large slabs of stone, a variety of marble, making a road of about ten feet in width,

The Hung-wu Gate led into what must have been an imperial park containing the altars to Heaven and Earth, the Ming tombs and other important buildings. Just outside the Hung-wu Gate, across the moat and about three hundred yards distant, are the ruins of an immense circular pavilion some two hundred feet in diameter. The stone bases of the pillars are still standing in two circles, one within the other. In numbers of places in this vicinity are ruins of old buildings which were roofed with green dragon tiles. About three quarters of a mile down the main road to the left of the Hung-wu Gate are the remains of the altars to Heaven and Earth, known now as the "Ta" and "Siao" Tien. The smaller adjoins the larger, which is a vast mound covered with broken bits of green tile and other *débris*. On the east can be outlined the terraces by which the ascent was made. The mound has been cut in two by a deep trench dug during the T'ai-p'ing Rebellion. In this trench were found several large stone bases, one of which measured some six feet square by four-and-a-half deep. This was without doubt the chief place of worship during the reign of Hung-wu. Here, as the great High Priest of his people, he offered sacrifices to Heaven and Earth. The present temple to Heaven at Peking, or the building commonly so called, has blue tiles. But this colour (WILLIAMS says) dates only from the reign of Hien Fung, of the present dynasty. Formerly the tiles there were of three colours—yellow, green and blue. Here, however, there are no remains of any but the green. Before reaching the Altar to Heaven the road divides, the branch to the left leading in the direction of the Ming tombs. In company with a friend I followed it up one day, feeling sure that this must have been the main road to the tombs, as it would not be at all in keeping with the imperial dignity to carry any member of the family to his last resting-place through the side-gate, and the Ch'ao-yang Mung is nothing else. We walked some distance beyond the parting of the ways, when we found the old road suddenly stopped by a dike of earth. A trench lay on the other side, doubtless a relic of T'ai-p'ing times. We could very easily trace the road beyond the trench, however, as the pavement is still visible for some distance, though overgrown

with grass, and when the pavement disappears the general configuration of the ground indicates the direction the road must have taken. We continued in this direction and finally struck the Chinkiang highway just beyond a lofty portal whose inscription requests officials to dismount. Several tablets are erected here at the side of the road, one of which, dating from the last emperor of the Mings, directs the officer in charge of the tombs to see that everything is kept in proper order, and warns all persons to avoid injuring the shrubbery, not to graze their cattle there or otherwise to damage the park, under penalty of capital punishment. This proves beyond a question that this was the main entrance to the inclosure of the tombs, and confirms the opinion expressed by Dr. EDKINS on his visit there. The funeral processions must have passed out of the front gate of the Forbidden City down the Yü-lu through the Hung-wu Gate and thence along the road which we traced to this portal, which marks the entrance proper to the cemetery. The road turned to the west to pass through this portal and continued in this direction to the summit of the hill overlooking the city, when it again changed its conrse turning toward the north, leading to a great pile of masonry, pierced by three well-turned arches. This massive structure is built of brick, except the base, which is faced with polished stone, a variety of marble, worked into an ornamental dado. The inner edges of the arches also were originally faced with stone. The pile is 84 ft. long, 26 ft. wide and is 26 ft. high. The gargoyles projecting from the corners indicate that it once had a handsome roof. Passing through these arches the road continues a short distance towards the north, when it enters a still larger structure some 83 ft. square and 40 ft. in height. The walls are drawn in slightly as they rise, giving a still more substantial appearance. Four lofty arches, one on each side, give entrance to the interior of the pile, which is now open to the sky, the roof having long since fallen into decay. This inner chamber is 37 ft. square and contains in the centre a large tortoise 15½ ft. long by 8 ft. wide and rising nearly 6 ft. above its base, and together with its base forms one solid piece. A tablet stands upon its back which is 20 ft. in height and contains an account of the life of Hung-wu

with a list of his battles. Passing out of the west gate the road crossed a deep gully by a bridge which has entirely disappeared, save one abutment. From this point on nearly to the tomb the "dragon-way" winds between two lines of mammoth images of animals and men, thirty-two in number, two pairs of each variety, one pair in a sitting posture and one pair standing, except in the case of the men, who are all standing. The animals are lions, camels, elephants, the "Ch'i-ling," horses and one other non-descript having the body of a tiger with the hoof of a cow. The elephants are cut from solid blocks of stone, the largest measuring 12½ ft. in length by 6¼ ft wide and 12 ft. high. The human images are two pairs of warriors clad in mail with war clubs in their hands, and two pairs of civil officials in their robes and bearing the mace of office. A stone portal of five gateways, beautifully executed, but now in ruins, closed the silent files, beyond which by winding curves the way approached the outer moat, which is spanned by three stone bridges, and entered the inclosure of the tomb. Within the entrance by a flight of stone steps we ascend a terrace on which formerly there stood some sort of hall. Several tablets are found there, among them one erected by K'ang-hi on his visit to Nanking. Other tablets have been destroyed. Descending and crossing a court we reach the site of the sacrificial hall, which has been entirely demolished. Beyond this we pass through a gate into another inclosure and cross the inner moat by what was once a handsome bridge with an ornamental balustrade of carved stone which is partially destroyed. Beyond this moat rises the *p'ai lou*, a massive structure of hewn stone about 130 ft. long, 60 ft. wide and 60 feet high. It is a solid mass penetrated by a tunnel which, starting from the middle of the front at the base, rises gradually on an inclined plane toward the rear. An inclined way continues from the rear around both ends to the summit, on which stands a large hall whose roof has fallen in. Here formerly no doubt was placed the tablet bearing the posthumous title of the Emperor, but it has entirely disappeared. The grave is in an immense circular mound, partly natural, partly artificial, about half-a-mile in circumference, which stands behind the *p'ai lou*. Tradition

says this mound is built of earth brought from each of the eighteen provinces. The tomb was begun to be built by Hung-wu in the first year of his reign but must have required many years for completion. Two members of his family died while he occupied the throne—his eldest son and his wife. Both were buried in this mound. There were formerly three mounds, but early in the present dynasty, when the place was put in order, these three were built into one as we see it now. The tomb, according to Dr. EDKINS, is similar to those at Peking and, if built on the same plan, each mound contains in the centre a large circular vault, capable of holding several hundred persons. The entrance to the chief one, Hung-wu's, which is the middle one, is by a tunneled passage closed by the stone wall just behind the *p'ai lou*. When the body of a dead Emperor is laid away, I have been told, a lamp is placed in the vault, fed by a large kang of oil and called the "wan-nien-têng" or "lamp of ten thousand years," and the entrance is sealed up never to be opened again. My teacher says he can remember visiting the place before the T'ai-p'ing Rebellion, when he was a boy of twelve or fourteen years of age, and paying an entrance fee of four cash. At that time, he says, there were in the sacrificial hall a large table for the sacrifices and two great chairs, said to be one for the Emperor and the other for his Empress. The hills were covered with beautiful trees and the "stone avenue" was bordered by rows of them. Since that time the whole place has been laid waste by the T'ai-p'ings. Adjoining the imperial burial-ground was another famous resort, the "Ling-seuh Sz," with its remarkable rafterless hall, the "Wu-liang Tien" built by the assistance of Hung-wu. The monastery dates from the Liang dynasty and was founded by Pao Chi, a celebrated monk of that age, who is credited with having invented the theory that the tortures of the damned may be relieved by the tolling of a bell, which furnished the Buddhist priests with a new occupation. He was a favourite counsellor of the Liang Wu-ti and by his aid established his monastery on the hill now occupied by the sepulchre of Hung-wu. In order to obtain this hill for himself, Hung-wu gave the monks the beautiful spirit vale and erected for them the great pile of buildings, ruins of which are still seen scattered through the grove. A finely

drawn portrait of the founder, Pao Chi, is preserved there on a stone tablet. The artist was Wu Tao-tsz, one of the most famous painters of China, who lived in the T'ang dynasty, and is worshipped, Dr. EDKINS tells me, by the Japanese, as the god of painting. A few verses are cut beside the drawing which are ascribed to Li T'ai-peh, a noted poet, also of the T'ang dynasty. The verses give a brief sketch of the founder's history, who was, we are told, found, when an infant, in an eagle's nest and brought up by a poor farmer, though his embroidered robes indicated that he really belonged to some wealthy family. But the most interesting object at Ling-kuh Sz is the "Wu-liang Tien," mentioned above. The building is about 140 feet long and 75 feet wide. It is built entirely of brick and stone, no wood at all being used. The structure consists of a nave and two aisles, and the roof is one splendid arch whose ends rest upon the smaller arches which cover the aisles. The walls are from 10 to 12 feet in thickness. The only light admitted, save through the doors, comes from two windows fixed high up in the ends of the nave. To what use the building was put, is difficult to say. Dr. EDKINS expressed the opinion that it was the picture gallery of the monastery, as the history of the place speaks of a building devoted to this purpose, but the want of light would seem to be a serious objection to this theory. The Drum Tower, which still stands in a very good state of preservation, was built on the summit of the first hill outside the old North Gate. It dates from the third year of his reign. A bell tower formerly stood near by on the west, but has been destroyed. The place, however, is still known as the "Chung-ku Lou" (the bell-drum tower) and is located about half-way between the South Gate and the Z-fung Mung, which is the gate nearest the river-landing, so that a local saying in common use is "Shang tsih, sha pah" (Seven up and eight down,) *i.e.* seven *li* from South Gate to the Drum Tower and eight from there to Hia-kwan. A large tablet is erected here in memory of the visit of K'ang-hi, and preserves an exhortation delivered by him to the Nankingese, reproving them for pride and extravagance and recommending economy. The structure which covers it, used as a Buddhist temple, has been built since the T'ai-p'ing Rebellion. Another

interesting relic of the period is a large bell cast in the twenty-first year of Hung-wu, which is now suspended in a temple not far from the Drum Tower. It is 18 ft. long and 7 ft. across the mouth. The metal is from 3 to 4 in. in thickness. Whether it was ever used before or not is doubtful, as it contains a serious flaw in the upper part which greatly injures its tone, and until two years ago it lay half-buried in an open field, furnishing a home for beggars. The natives were wont to tell marvellous stories about it: how it fell down from heaven, and how the T'ai-p'ing rebels tried to lift it up but failed. A strange prophecy was circulated that the bell could never be raised until Nanking should enter on a new era of prosperity. It is significant, or might be to those who trusted in the prophecy, that it was at last raised by the aid of foreign machinery and suspended in a tower whose frame-work is of hollow iron castings. And when it was raised, lo! this legend greeted those who had told of its fall from heaven: "Hung-wu 'rh-shih-yih nien, kiu yueh, kih 'rh chu." A more romantic story tells us that when Hung-wu ordered the bell to be cast, he directed that a certain amount of the precious metals should be put in the melting furnace, but that they would not unite, and after various founders had exhausted their skill, a noted artisan was summoned and commanded to furnish the bell in a certain number of days or lose his head. In vain did he labour; the refractory metals would not fuse and the master naturally betrayed some anxiety. His eldest daughter noticing her father's careworn look persuaded him to tell her the cause. She fell asleep that night, weeping over the doom that threatened their home, and in her sleep dreamed that the blood of a virgin alone would cause the metals to unite. Awakening she arose and dressed herself, and while doing so aroused her two younger sisters, who inquired her purpose. After refusing some time to tell, she yielded to their entreaties, and they, in spite of her remonstrances, insisted on accompanying her. So the three sisters made their way to the furnace and leaped into the molten sea. At once three great bells sprang aloft into the air. One fell in the Yangtsze, a second in the Imperial City and the third is this which alone remains. Images of the three maidens are set up in the temple where it hangs, and

the ashes of the incense burned on their altar is said to be a sure cure for all manner of ills. The shrine is a very popular one with women.

The present city wall was not finished until the twenty-third year of Hung-wu. It then contained thirteen gates: east of the palace the Ch'ao-yang Ming, south of the palace the Chung-yang Ming, now known as the Hung-wu Ming, next in regular order the T'ung-tsi, the Nan Ming (at that time called the Tsü Pao), the San-shan, the present Shui-si Mung, the Shih-ch'ung, or, as we call it, the Han-si Mung, the Tsing-liang Mung, now closed, the Ting Hwai, also closed, the I-fung, the Siao-tung Mung or Little East Gate (sometimes called the Chung-feu Mung), now closed, the King-chuang, also closed, the Shung-tsei and the T'ai-p'ing. Besides these there is another closed gate on the north, unknown to the maps, and formerly there was a little gate west of the T'ai-p'ing Gate, known as the Hei-hu Siao Mung, the Back-lake Little Gate. The wall is ninety-six *li* in length (about thirty-two miles) and with three men to each embrasure will require an army of fifty-two thousand men to defend the battlement. The wall was built so as to furnish two hundred and forty-seven projections for batteries, which would require twelve hundred cannoneers. It was the desire of Hung-wu to include Purple Mountain in the city, lest at some time it should fall into the hands of an enemy (an event which happened in the T'ai-p'ing Rebellion), and put the city at the mercy of their cannon, but this would make the inclosure too vast for effective defence, and he contented himself with forming a chain of outposts encircling the city. There were eighteen of these posts commanding the chief approaches to the capital, and each one called a gate.

These names (with two exceptions) still remain to remind us of his plan of defence: Yao-fang, Sien-ho, Ts'ang-po, Ch'i-hing, Kao-k'iao, Shwang-k'iao, Ta-ang-teh, Siao-ang-teh, Shih-ch'ung-kwan, Kiang-tung, Wai-king-chwan, Fu-hing, Shang-yuen, Kwan-ying, Shang-fang, Kiah-kan, Fung-t'ai and Swing-siang. While speaking of the wall it may be interesting to note that the first wall built about the city was by the Prime Minister of Yueh Kwoh,

named Fang Li. This state existed from 537 to 334 B.C., the capital being in Chekiang. This wall was but two *li* and eighty paces in length, and inclosed the town of Ma-ling Hsien, which was situated just outside the present South Gate, where the arsenal now stands. It is not identical with the present Ma-ling. The oldest part of Nanking therefore lies outside the South Gate, and from four or five hundred years before Christ down to the present time there has been a walled city on the site of this ancient capital. One of the most useful works of Hung-wu was the construction of the great highway from Nanking to Peking by way of Fung-yang Fu. I have had the privilege of travelling over it as far as Fung-yang, and have been astonished by the skill shown and the expense lavished upon it. Even as it is now, in ruins, a carriage could be driven with very little difficulty the whole way. The roadway throughout its entire length, except where broken at a few places, is from twenty-five to thirty feet in width, is well graded, and drained by ditches at either side. The bed of the road is built up in some places from twelve to fifteen feet above the fields. Whether it was originally paved throughout its whole length or not, is difficult to say. I am inclined to think that it was, as there are remains of the pavement scattered all along. The bridges are models of architecture, built of stone with many well-turned arches. The three largest have five, seven and twelve arches respectively, spanning three large rivers, which are crossed. The road is still the chief thoroughfare for travel to and from the north-west, and long caravans are daily seen moving over its course. It is a great pity that the road has been allowed to fall into neglect, and a great shame that a little of the vast sums of money annually wrung from the people should not be used in making similar roads in other parts of the Empire. Hung-wu was on the throne thirty-one years, and died at the age of seventy-one. Judging from the portraits published of him, he was not a handsome man. That in the monastery at Fung-yang Fu shows him to have been a spare man, with thin face, high cheek-bones, a long, hooked nose, and a strong mouth firmly closed by a heavy, projecting under jaw, indicating a powerful will. The tablet at

the tomb represents him as wearing long whiskers, but he has a clean face in the picture just mentioned. He was apparently a man of generous mind, of quick, active temperament, a man of strong passions, and in his later years very irritable, but like many such men easily turned from his wrath and ready to forgive. He was a man of profound wisdom and a keen judge of men. He was emphatically a soldier, but in all his operations he seems to have consulted the welfare of the people. At the siege of Ho-yang his officers carried off a number of the women, but Hung-wu, as soon as he heard of it, restored them to their homes. He was no lover of luxury, as was perhaps natural in one who had spent the greater part of his life in camp. On one occasion an officer came to him with gifts of gold and precious stones, hoping to win his favor. Hung-wu refused the gifts saying:—"I have no use for these things; I want men, good, able men or useful articles such as grain or cotton." He left an axiom to his officers that the best soldiers of other lands would doubtless approve. He said:—"A General should make his operations like a sweeping fire, but he should not love slaughter. That is not to the interest of the kingdom, but on the contrary destroys its happiness."

To his wife, Maw Heu, must be ascribed a great deal of the leniency which he exhibited in his treatment of his captives and others. She is reported to have said:—"We do not know for whom Heaven has destined the throne, but we do know that the hearts of the people will turn to him who does not love to kill." The elevation of the little slave-girl of Ch'u-chen to the lofty seat of an Empress is a strange event, yet not so remarkable when we reflect that her rise was due alone to the success of her husband; but that she should worthily fill this position and prove a helpmeet for her husband, is most extraordinary and shows that Chinese women are no less capable when opportunity offers than their sisters of other lands. "The hand that rocks the cradle" may "rule the world" in all continents. This woman had a remarkable influence over her husband from her first acquaintance with him, when she served in his uncle's house,

down to the day of her death. This seems to have been one of those rare cases in China of marriage with love; and the Chinese who have little that is good to say of woman in their literature, do great honour to themselves in the appreciation they show of the Empress in their histories of this period.

The Chinese historian says of her:—"Her disposition was reverential, economical, charitable and virtuous. She ever exhorted her husband to lay up merit and not wantonly to shed blood. The Emperor loved her, and after her death chose no other Empress."

When this noble woman was taken from him he seemed to become an entirely changed man—peevish, harsh and violent. He forgot many of the fine maxims he had adopted at the beginning of his reign. Though he had passed such stringent laws against the Buddhist, she gathered quite a number of monks into the palace, and one of these, a clever man whom he sent to his son Yung-loh at Peking, was the adviser of that son in his rebellion a few years later against Kien Wun. He grew suspicious too, and descended to the most cowardly and unworthy means to discover accusations against him, employing spies to go about among the people and listen to their conversation. If one was heard breathing a word against his Majesty, he and his household were immediately exterminated. One old woman was executed for speaking of him as "Lao-t'eu-tsz." Thousands of people are said to have been slain in these freaks of temper. He was very cruel in his punishments too. He is said to have flayed people alive, and one of his Ministers who was accused of plotting treason was torn to pieces little by little. It is said very few of his Ministers died a natural death.

All this seems out of harmony with his earlier character, and much of it must no doubt be ascribed to the loneliness and childishness of a widowed old age. Much as we must deplore these faults, we can overlook them for the sake of the many virtues which he displayed. Judging him fairly and impartially we must admit that he was a most remarkable man. The verdict of the Chinese historian does not seem extravagant: "From the most ancient times there has been no emperor like him." He was the Napoleon of

China, and, making all due allowance for the differences between the fourteenth and the eighteenth centuries and between Europe and China, there are many striking resemblances in the lives and fortunes of the two men. Each seems to have been born for a particular crisis in the history of his native land. Both were brought into prominence by revolutionary struggles. Both rose by the power of the sword from a plebeian poverty to the possession of imperial honours. Both were skillful soldiers, and the genius of the Corsican corporal, his keenness to detect the weak point in his adversary's position, his celerity of movement and power of combination, his coolness, and, when necessary, his recklessness and daring, had their counterparts in his predecessor of the Celestial Empire. Napoleon was the greater soldier, but he was not so wise an emperor. He won a throne, but lost it by his folly. Hung-wu, on the contrary, established a dynasty that lasted for three hundred years, and one that has indelibly impressed itself upon the history of China.

A short discussion followed Mr. WILLIAMS paper, in which the Chairman and several members took part, and the proceedings terminated with a cordial vote of thanks to the learned lecturer.

COUNCIL'S REPORT FOR THE YEAR 1890-91.

The Council of the North China Branch of the Royal Asiatic Society beg to present their report for the year ending the 30th of April 1891.

1. *Council.*—At the annual meeting, held on the 19th May 1890, the following members were elected office-bearers of the Society:—

P. J. Hughes, M.A.,	*President.*
P. G. von Möllendorff, Esq.,	*Vice-Presidents.*
Joseph Edkins, D.D.,	
Wm. Bright, Esq.,	*Honorary Secretary.*
Thos. Brown, Esq.,	*Honorary Treasurer.*
Rev. Ernst Faber, D.D.,	*Honorary Librarian.*
Carl Bock, Esq.,	*Hon. Curator of Museum.*
J. Ritter von Haas,	*Councillors.*
R. A. Jamieson, M.A., M.D.,	
D. C. Jansen, Esq.,	
G. M. H. Playfair, Esq.,	
Rev. A. Williamson, D.D.,	

Of these, our late honoured President, Mr. P. J. Hughes and the Honorary Secretary, Mr. Wm. Bright, resigned, at their departure from Shanghai; whilst in the case of the much lamented Rev. Dr. A. Williamson, his unexpected end has deprived the Society of one of its ablest supporters. At the request of the Council, Dr. Edkins has acted as President, and Mr. J. Mencarini was appointed to the post of Honorary Secretary.

2. *Members.*—Fourteen new members joined the Society during 1890-91; eight retired, and one ordinary member was elected honorary member. The roll on the 30th April last stood thus:—1 Honorary Protector, 8 Honorary Members, 23 Correspondent Members, 228 Ordinary Members (8 of whom are Life Members).

3. *Meetings.*—The following three papers have been read at general meetings of the Society:—"The Fish-skin Tartars, their Sable and Seal Hunting and Bear Feasts," by Mr. M. F. A. Fraser; "Yunnan: Its Routes and Treasures," by General W. Mesny; and "The Probable Foreign Origin of the Ass, the Cat and the Sheep in China," by Dr. D. J. Macgowan. At the annual meeting a very interesting paper on "Hung-wu and His Capital," by Rev. E. T. Williams, of Nanking, will be read.

4. *Journal.*—Some of the above-named papers will be printed in due time in the Society's Journal. The printers have now in

hand a most valuable work of Dr. Bretschneider on the "Botany of the Chinese Classics," the publication of which on account of its length and technical difficulties has been much delayed. Indeed, some time must yet elapse before it can be presented to the members, as the volume for 1891. Dr. Faber has kindly undertaken the difficult task of correcting the printers' proofs and adding many notes, which will render the work the most comprehensive and useful book which has yet appeared on Chinese Botany. Many answers have been kindly sent in response to the Council's circular requesting information on "Inland Communications," but still much more information is wanted to make a complete repertoire on this most interesting subject.

5. *Officers' Reports.*—The Honorary Treasurer's, Librarian's, and Curator's reports are herewith published. The Honorary Treasurer reports that he has been able to collect a considerable sum of subscriptions in arrears. The Society's financial position, as will be seen by the accounts, is in a most satisfactory state, thanks to the energy of the Honorary Treasurer, Mr. Thos. Brown. The Honorary Librarian's report shows how much the Society is indebted to Dr. E. Faber for his untiring work. Under his experienced care the Society can now boast of having a most carefully classified Library. As will be seen by the Honorary Curator's report, the Society's Museum has been enriched by several of the most rare and unique specimens of Chinese butterflies from Captain Yankowsky's renowned collection. These were selected and purchased at auction by the Honorary Curator, Mr. Carl Bock.

On Mr. P. J. Hughes, late Consul-General for Great Britain, retiring from the Presidency of the Society, the Council, to mark their high appreciation of the very valuable services rendered by him to the Society, nominated him an Honorary Member. This distinction was unanimously voted at a general meeting held on the 20th of April last.

For the Council,

J. MENCARINI.
Hon. Secretary.

Hon. Treasurer's Report.

In presenting my accounts I have nothing special to remark beyond the fact that the period covered is for 16 months, *viz.* from January 1st, 1890, to April 30th, 1891. This has been done in order to bring the fiscal year down to the same date as the Secretary's report.

Thomas Brown,
Hon. Treasurer.

June 19th, 1891.

THE HON. TREASURER IN ACCOUNT WITH THE SHANGHAI MUSEUM.

Dr. *For the period ended April 30th, 1891.* *Cr.*

INCOME.	Tls.	cts.	EXPENDITURE.	Tls.	cts.
To Balance 1889	120	64	By wages taxidermist and coolie	438	33
„ Grant French Muncipal Council	100	00	„ Muncipal Taxes	19	74
„ „ English „ 1890	500	00	„ Rent paid to Shanghai Library	150	00
„ „ „ „ 1891	500	00	„ Interest paid to Recreation Fund	75	00
			„ Collection of butterflies purchased	25	00
			„ Balance	512	57
Taels	1,220	64	Taels	1,220	64

E. & O. E.

SHANGHAI, 30th April 1891.

THOMAS BROWN,

Hon. Treasurer.

Compared with Vouchers and found correct,

A. W. DANFORTH.

HENRY SCHIOTZ.

Shanghai, 19th June 1891.

THE HON. TREASURER IN ACCOUNT WITH THE CHINA BRANCH OF THE ROYAL ASIATIC SOCIETY.

Dr. *For the period ended April 30th, 1891.* *Cr.*

Income.	Tls.	cts.	Expenditure.	Tls.	cts.
To Balance 1889	532	81	By printing and binding Journals	541	53
„ Subscriptions from members	826	87	„ Postages	65	39
„ Sale of Journals	103	10	„ Advertising and stationery	37	99
„ Rent of rooms	10	00	„ Muncipal government and land taxes	21	55
„ „ from Shanghai Library	100	00	„ Furniture	30	00
„ Interest allowed by bank	12	43	„ Bookbinding	141	79
„ Exchange Account		03	„ Fire insurance	17	18
			„ Wages	159	41
			„ Gas	3	04
			„ Mrs. Gale's honorarium	60	00
			„ Shroffs, for collecting	15	00
			„ Balance	492	36
Taels	1,585	24	Taels	1,585	24

E. & O. E.

Shanghai, April 30th, 1891.

Compared with Vouchers and found correct.

A. W. Danforth.

Henry Schiotz.

Shanghai, 19th June 1891.

THOMAS BROWN,

Hon. Treasurer.

Curator's Report.

The thanks of the Society are due to Mr. H. B. Endicott for presenting to the Museum a fine specimen of a rare New Zealand bird, the *kiwi kiwi*, or *Aptenyx Mantelli*. It is the only family still in existence of the giant Moa birds of New Zealand, and is yearly approaching extinction. Also a beautiful specimen of an African lion has been presented by Mr. Frame, of the Chinese Zoological Gardens. The Society has bought part of the fine collection of butterflies made by Captain Yankowsky, but unfortunately they have not been named and classified yet, as Captain Yankowsky's catalogue has not been found. It is hoped that the work of naming and classification will be done at some future time, when types of comparison and the literature, necessary for the determination of species, will be found.

Carl Bock,
Hon. Curator of the Museum.

Librarian's Report.

The library is gradually coming into a satisfactory condition. 269 volumes have been bound during the year. The library room was kept open seven hours a day. Mr. Wang spends much time there and assists the visitors to find the books they wish to see. Some visitors spend hours in reading and making notes. There can be no doubt that the library will become more useful to scholars every year. In order to increase its usefulness efforts should be made towards a complete collection of books on China and the Far East. The literature on other parts of Asia might also be better represented. Members and friends of the Society could assist us by donations of books. Especially authors should consider it a privilege to present a copy of their publications for exhibition in our library. Some duplicates may be had in exchange.

E. Faber,
Hon. Librarian.

Shanghai, May 1891.

MINUTES *of* PROCEEDINGS *at a* GENERAL MEETING *held at the Society's Library, Museum Road, Shanghai, on Monday, 9th November 1891, at 9 p.m.*

Mr. N. J. HANNEN (President) occupied the chair. There was a small attendance.

At the opening of the proceedings the Chairman said:—As he presented himself before the Society that evening for the first time as President, he felt it incumbent upon him to thank them for the honour they had done him. They had a new President, a new Secretary, and they were then meeting in a new room, and he hoped the President and Secretary would prove as good as the room was, and that they might all get on and do as much for the Society as the room in its present state was likely to do for it. He was afraid he would be able to help them very little in scientific attainments or knowledge of China. He had been so long absent from this country that his knowledge of it was derived from the old days, but he would promise to take a cordial interest in the proceedings of the Society; he hoped to be able to attend to it, and he knew the members would accord to him the assistance and support they had always given their Presidents.

The Secretary (Mr. VOLPICELLI) then read a list of the new members, and the minutes of the last meeting having been taken as read,

Mr. KINGSMILL then read his paper entitled "A Comparative Table of the Ancient Lunar Asterisms" which is printed *in extenso* pp. 44-79 of this volume.

Astronomical history, the writer said, may be said to have had its beginning about the year 2150 B.C., when the astronomers of Chaldea substituted solar for lunar observations, and marked out the Zodiac into the twelve signs, which, with little change, still survive. Prior to this date the moon had kept guard over the calendar, and the seasons of the year were connected with the position of the moon amongst the stars bordering the ecliptic. As,

however, the anomalistic month was not commensurate with any even number of solar days, a difficulty was always experienced in the accurate division of the groups, which, however, were pretty regularly divided into twenty-seven or twenty-eight, the latter number finally for the most part prevailing. There is evidence of a former very wide extension of the Asterisms from China to Greece, and even to Italy; and Chinese, Indians, ancient Persians and Arabians have preserved the knowledge of the entire, while a considerable number are preserved in old Grecian lore. In Arabia they have come down as the twenty-eight manâzils; and the mazzaroth of the Books of Job and II Chronicles have by competent authorities been interpreted to indicate their extension into ancient Chaldea and Palestine. The change from the lunar to the solar calendar did not take place without opposition, and mythology preserves some tales which can only be referred to the strife between the two: as when in Europe at the reform of the calendar, as late as the sixteenth century, the ignorant crowd demanded back the ten days which they alleged had been stolen from them.

In the early lore of China these myths are frequent; thus the *Shu-king* tells of T'ai k'ang, that he went wandering across the Ho; attempting to return, his passage was obstructed by the great hunter I, who dethroned him and occupied the government for twenty-seven years, the tale plainly alluding to the crossing of the zodiac by the sun, and its return at the vernal equinox, when the great hunter Orion was found shooting his arrow (now his belt) at the Pleiades, which then marked the equinoctial point. So Wu shun, the especial solar hero of the Chinese, had to undergo his trial of twenty-eight years, *i.e.* passed through the entire zodiac, before his confirmation.

Sundry attempts, founded evidently on astronomical formula, have been made in China to establish a chronology. The most popular makes the state to have began with ten dynasties the united number of whose reigns mounts up to 216, evidently related to the number of minutes (21,600) in the great circle of the zodiac. The ten dynasties must be referred to the same source as the ten antediluvian kings of Berosus, whose united reigns amounted to 120 *sari* of 3,600 years, or 420,000 years in all, where the same numbers

are repeated, or the ten antediluvian patriarchs of Genesis, whose united years, deducting the times lived before the birth of the successor, the overlap of constellations apparently amounts to just 7,200 (short by a year), and is still divisible by the ideal number 3,600 (so also in Persia) history is made to begin with the ten sovereigns of the Paishdadian dynasty (an artificial number adopted to suit some ancient tradition). In China no trace is to be found of these pretended legends till after the time of the Emperor Wu, whose ambassadors opened communication with the West, and it was from the knowledge there acquired that in 105 B.C. that monarch ventured on introducing the present Chinese calendar, calling the year by the appropriate name of T'ai-ch'o (grand beginning). Previously the calendar had been permitted to fall into hopeless confusion, so that none had any clue to the course of time; in Siang Wang's time (625 B.C.) the *Shi ki* tells us three intercalary moons had to be added, and as no written record of any sort goes much beyond the year 721 B.C., Sze-ma Tien, in his history, makes no attempt to found an earlier chronology.

The so-called dynastic records of early China begin in myth, and repeat themselves closely, even those of the earlier Chows are little more than fairy tales. The handsome Muh and his eight horses, his visit to the realms of Si-wang-mu (Sameru), and his feasting at the K'wen-lun, *i.e.* with the Gandharvas, are a fit sequel to the myth of the dawn brothers, Tan and Fat, and the battle of Mukye, with which the record opens. The previous dynasty of the Shang-yin, with its twenty-eight sovereigns compounded of the calendaric stems, is even more purely astronomical, and, as in the story of T'ai k'ang, told above, we find P'an Kang, the equivalent of 胃 Wei, the 16th Lunar Mansion, crossing again the Ho (the equinox), the autumnal equinox B.C. 1600 actually being marked by the full moon in that asterism.

The whole myth of the dynasty refers indeed to the passage of the sun through the zodiac every year, and is as little historical as the twelve "Labours" of Hercules, which were a generation ago still taught to school-boys as genuine history. It is possible to trace the myth to the land whence sprung those Aryan tribes to

which Indians, Iranians, Chinese and Greeks owe so many common traditions. Iranian legends tell us of the happy land of Yima Kshaetra, the Airyana Vaejo, where was no cold, no heat, no old age, nor death. But it was not always to remain so, the climate became cold and wintry, and with the snows came the hordes of plundering Turcomans, who compelled the settled inhabitants to quit their once happy homes, dispersing them south, west, and east, to India, Iran, and even to the distant T'ien-shan. At this latter point, in K'i, we find the ancestors of the Chows settled some twelve centuries B.C., but they were not yet to escape the persecution of the Turkish tribes, so under King Wan and his two sons, the Chinese Dioscuri Wu Wang and Chow Kung, they poured into Northern China, assuming the government of the pastoral tribes and impressing on them their cult, and even in great measure their language. Here they called themselves Li-min, *i.e.* Aryan men, a name curiously twisted, when their blood had degenerated through admixture with the aborigines, to mean the "black-haired race," an utterly impossible derivation.

The paper proceeded to give a general description of the Mansions as found from China to Arabia. The Chinese system must originally have commenced with the stars in the forefront of Scorpio, the 房 (Fang or Chamber) of the Chinese, literally the *Cancer* from which the chariot of the sun rushed when he was about to commence his annual journey. Some of the stations are of more than ordinary interest, being connected with widespread legends, that of Ki seventh on the ordinary list is thus connected with the myth of Kitsze who fled from the Court of the hated Chow of Yin to appear again in the land of the saffron dawn Ch'oun-sien, by the enhemerists said to be Korea. The legend of Ki (the winnowing tray) goes further, for we find the çufra one of instruments given by Ahura-Mazdu to Yima himself in the golden paradise of Airyano Vaejo. More interesting still, from the light it throws on old legend, is the sixteenth, the Low of the Chinese Alpha and Beta Arietis; the writer showed that etymologically the name is connected with the Açvinau (or twin horsemen) of the Indians, whose name was originally Daçvinau (the *vedettes*), whose

peeping over the horizon, 2200 B.C. announced the coming vernal equinox. With the precession of the equinoxes the twin horsemen were placed in Gemini, the two conspicuous stars, Castor and Polliux taking the place of the older but displaced vedettes. The *Shi-king* contains [II. 4. II.] a hymn referring to these stars, which the author translated and pointed out the resemblance to the Greek myth of Eos and Tithonus.

The closing groups of the system evidently relate to the celestial chariot, with its archer Chang (No. 26) rushing towards the goal, the Pi (now No. 3). We have here in succession the flank crossbar and pole headed by the yoke K'ang (2), which is on the very point of reaching the goal, the *Meta* of the Roman circus.

The writer referred to the curious fact that for so many centuries the celestial map had remained unchanged, and that the constellations when carefully studied afford a record of much that is interesting and much that is valuable in the history of humanity.

Discussion on the paper was then invited by the Chairman.

In the course of a few brief remarks Dr. EDKINS called attention to the fact that the visitor to Peking always gets the impression that it is the capital of a country which cultivates astronomy, and probably it is the only city in the world in which this idea is brought before the traveller. There is something very creditable in the way in which the Chinese forward the claims of astronomy, and it is a mark of the ancient and very high civilisation of China.

Dr. FABER pointed out that the care the Chinese devoted to the science of astronomy was, primarily, for the mere purpose of arranging the calendar.

MINUTES of PROCEEDINGS at a GENERAL MEETING *held at the Society's Library, Museum Road, Shanghai, on Tuesday, 24th November 1891, at 9 p.m.*

Mr. N. J. HANNEN (President) occupied the chair. There was a good attendance.

The PRESIDENT, after a brief introduction, called upon Professor HITCHCOCK to deliver his lecture on "The Ancient Tombs and Burial Mounds of Japan."

Prof. HITCHCOCK began by observing that we are accustomed to regard all ancient religious worship as mere superstitious observances of ignorant peoples. But the burial customs of prehistoric nations and tribes have preserved to us many precious relics of primitive culture, and tell us in unmistakable language that the belief in a future life is one of the oldest among the many, far less rational, upheld at the present day. While the form and structure of the Japanese mounds were now known, thanks to the as yet unpublished researches of his companion in many journeys in Japan, Mr. W. GOWLAND, their early origin was yet to be traced. It was surmised that a few at least of the Japanese burial customs were derived from China. In the course of his own travels in the north he had failed to discover any indications of the existence of mounds like those in Japan; but he still expected to hear of them from some experienced traveller in the interior of this vast empire. Referring to the origin of the tombs, the lecturer said the first Emperor, who lived in the 7th century B.C., is supposed to be buried in Yamato, and the tombs of his successors are pointed out by the Imperial Household Department. The identity of the sepulchres may be questioned, but it is a fact that we can distinguish consecutive modifications of form apparently corresponding to successive periods of time. Several distinct methods of interment have prevailed at different periods in Japan. They may be conveniently distinguished as follows: (1) burial in artificial rock caves, (2) in simple earth-mounds with or without coffins, (3) in rock chambers or dolmens, (4) in double, or Imperial mounds. The lecturer then proceeded to illustrate the appearance of these different kinds of mounds by the aid of photograph slides thrown on to a screen. He showed that the double mounds were invariably protected by a wide and deep moat, sometimes by two, and consisted of two distinct mounds with a depression between them. One of these double mounds at Nintoku Tenno, near Sakai, according to Japanese reckoning, dates from about the fourth century. The height is

about 100 feet and the circuit of the base 1,526 yards. The Emperor Kei Tai, who is reported to have lived in the 6th century, was one of the last Emperors known to have been buried in a double mound. Some mounds have terraced sides, and this form is said to date from about the 7th century. Large quantities of clay cylinders were used for the purpose of preserving the terraces against the effects of the weather. When the covering of earth is removed it is found that the stone chamber beneath, which contained the coffin, opens through passages often 40 feet and sometimes 60 feet long. The earth has in many cases been washed away from the mounds, exposing the rocks which were piled over the central chamber. According to a Japanese authority, in all the sepulchres the first order of performing the burials was the piling up of the earthen mound, leaving an underground tunnel leading from the outside to the very centre of the mound. This mound completed, the coffin, usually carved and made of stone, in which the corpse was placed, and sealed, was then introduced through the tunnel and placed in the centre of the mound, and the tunnel was then filled up with stones. The lecturer, however, said the coffins were not always introduced through the galleries, and the tunnels were certainly not filled up with stones, although their ends were probably closed with stones. He inferred from his own observations that the chambers were frequently if not usually built round the coffins. Stone and clay coffins had been found together in one cave, showing them to have been contemporaneous. After showing a number of photographs of the pottery discovered in the mounds, the lecturer drew attention to a number of small clay figures representing human beings. He said it was a very ancient custom in Japan to bury the retainers of a Prince standing upright around his grave. Like many other customs this also came from China. In the time of the Japanese Emperor Guinin [97-30 B.C.] his younger brother died, and they buried all who had been in his immediate service, around his tomb alive. "For many days they died not, but wept and cried aloud. At last they died. Dogs and crows assembled and ate them. The Emperor's compassion was aroused, and he desired to change the custom. When the empress Hibatsuhime-no-Mikoto

died, the Mikado inquired of his officers, saying: 'We know that the practice of following the dead is not good. What shall be done?' Nomi-no-Sukune then said: 'It is not good to bury living men standing, at the sepulchre of a prince, and this cannot be handed down to posterity.' He then proposed to make clay figures of men and horses and to bury them as substitutes. The Mikado was well pleased with the plan, and ordered that henceforth the old custom should not be followed, but that clay images should be set up round the sepulchre instead." Even as late as the year 646 an edict was published forbidding the burial of living persons and also the burial of "gold, silver brocade, diaper or any kind of variegated thing." From this it might be inferred that the old custom of living burial was kept up to some extent even to the 7th century. The edict reads: "Let there be complete cessation of all such ancient practices as strangling one's self to follow the dead, or strangling others to make them follow the dead, or of killing the dead man's horse, or burying treasures in the tomb for the dead man's sake, or cutting the hair, or stabbing the thigh, or wailing for the dead man's sake." The figures of clay thus introduced as substitutes for human sacrifices, and also to take the place of horses, are known as *tsuchi ningio*. Specimens of them are now very rare, and this fact leads to the supposition that the figures were not buried but left exposed on the surface of the ground.

The Chairman, on behalf of the Society, thanked Prof. Hitchcock for his very interesting lecture, and M. Vosy-Bourbon for his kindness in manipulating the lantern.

In the discussion which followed, Dr. Edkins pointed out the resemblance which existed between the stone relics found in Japan and China and in Europe, as indicating the existence of communication between distant lands in those days. It was also very interesting to note that, in the very earliest ages, men had been possessed with the idea of a future life for the soul.

Dr. Henry observed that the investigation of burial mounds was a field of antiquarian research in which scarcely anything had been done; and he urged that the attention of members should be directed to this subject.

Mr. T. W. KINGSMILL pointed out the existence of a series of mounds stretching from Wongdoo to Tachanchow which might repay research. With regard to the custom of burying alive a number of retainers with a departed monarch, there was a description of such an event in one of the old Chinese books.

The PRESIDENT closed the meeting by thanking the gentlemen who had contributed to the evening's entertainment in the discussion.

MINUTES *of* PROCEEDINGS *at a General Meeting held at the Society's Library, Museum Road, Shanghai, on Friday, 29th January 1892, at 9 p.m.*

Mr. N. J. HANNEN (President) occupied the chair. There were about 20 members and their friends present.

At the opening of the proceedings the CHAIRMAN announced that no new members had joined since the last meeting, and there was no preliminary business to transact. He therefore called upon Dr. Edkins to read the paper translated from the Russian by Mr. M. F. A. Fraser, entitled "A Journey to the Upper Waters of the Orkhon and the Ruins of Karakorum," by M. N. Yadruntseff.

Dr. EDKINS, after indicating on the map the position of Karakorum, the ancient capital of the Mongols, then proceeded as follows :—

The object of the expedition was the exploration of the Orkhon Valley not only geographically and ethnographically, but also archæologically. I chose this part of Mongolia for my journey because it presents a peculiar interest for historical geography. It was visited by Marco Polo, Plano Carpini [in 1246] and Rubruquis [in 1252], but it has been hardly touched by contemporary travellers, as it is now a desert and has lost its early historical significance. The Russian explorers of Mongolia—N. M. Prjevalsky, G. N. Potanin, M. N. Pevtsoff—have done much to make it known, but still many

localities in it have never been explored in detail. One of these spots is the valley of the Orkhon, concerning the upper waters of which river there have been many misunderstandings, contradictions and inaccuracies published. It suffices to mention that the Tola, a river well known to the Chinese as an affluent of the Orkhon, has been put down on many of the most recent maps as falling into the Khora-gol. The course of the upper Orkhon has been marked as vaguely and variously. The river Khadosyn has been put for the Kharukha; the Narin as an affluent of the Ugei-Nor, though in reality it flows out of Lake Ugei-Nor. For a long time it was not known that there are two Orkhons as far as to the Lake Ugei and not one. The upper course of the Orkhon deserved more accurate investigation, in view of its historico-geographical significance. There, according to all indications, was the very centre of the Mongol Empire; here were the first capitals of the Chinggisides, and on the Orkhon was founded the renowned capital Karakorum by Chinggis Khan himself, their great ancestor.

Enjoying the support of the East Siberian Branch of the Imperial Russian Geographical Society, and the protection of H. E. Count A. P. Ignatieff, we engaged in our Mongolian expedition in the summer of 1889. The *personnel* of the expedition was not numerous. The Buriat *taisha* S. A. Piroshkoff (educated in a Russian *gymnase*), performed the *rôle* of interpreter or translator; Lieut. Symloffski carried on the topographical work and took marching surveys; a baptised Mongol coolie, taken on at Kiakhta, and a Mongol guide who had been on the Tamir and the Tola; with myself, five in all. The E. S. Branch could allow us 400 roubles. It is hardly necessary to say we could not have gone with such funds; therefore S. A. Piroshkoff added 200 roubles, like a gentleman of means, and the remaining expenses, over 400 roubles, I took upon myself. We were fitted out with stores, and our preparations made cheaply by the Kiakhta merchant I. D. Simtsyn; with such small funds it was difficult to do much.

Among the other ends in view we had it in contemplation to ascertain the nature and extent of the advance of Chinese colonisation towards our boundaries on the Orkhon, and to observe the

nomad life of the Mongols, comparing it in our day with what we know from extant descriptions as it was in ancient times. Our route was the following : Kiakhta, along the Orkhon to the River Khoragol, up the latter to the temples of Dortkhe, over the mountains to the River Tola, along the River Kharakha to Khadasyn on the highway from Uliassutai to Urga to Lake Ugei-Nor, and then along the left bank of the Orkhon to the Valley of the Dadalkhyn-Tola, where are the ruins of Khora-balghassun, and an ancient town (450 versts from Kiakhta). Then an expedition to Isasan-Nor and Mount Khotond, along the River Djermanta to the Upper Orkhon, return to Khora-balghassun, and then an excursion to the Mongol monastery Erdeni-Tszo, cross to Kokshin-Orkhon, halt on the right side of it on Lake Tsaidam near the tombs, and return to Lake Ugei-Nor ; thence along the high road to Urga and back to Kiakhta. We kept to this route as a new one, avoiding falling into the route followed before by M. Potanin, and keeping well away from the Urga post-road. The whole expedition from Kiakhta and back occupied 50 days, in which we rode 1,500 versts. To cover such a journey with an expedition fitted out so economically would have been impossible with comrades less untiring and energetic than mine showed themselves to be. The result of the expedition was the acquisition of new matter for a map of the upper Orkhon country ; detailed surveys between Ugei-Nor, the Djermanta and the sources of the Orkhon ; plans of ruined towns ; and the discovery of the remains of three royal residences on the Tola and Orkhon. The Kereksurs and tombs were located on the map, examined and classified according to types. The antiquities of Erdeni-Tszo were investigated. Vestiges of ancient inscriptions were discovered there, and important Runic inscriptions on tombs on the Orkhon, with magificent monuments of marble and granite. These discoveries came as a surprise to us, as not a single traveller had mentioned such things. It goes without saying that the means and strength at our disposal were quite inadequate to deal effectively with finds of such weighty import. We had to make our surveys of forts and ruins by eye on a 5-verst scale. It was often impossible for us to roll over stones adorned with inscriptions as we desired, as among

these stones were many that must have weighed from 400 to 500 pouds [a poud is 40 Russian pounds, or a little over 36 pounds av.]. What we effected was therefore more a reconnaissance than an exploration, the fruits of which will be for the next expedition. At least we came away convinced that the Valley of the Orkhon is no mere desert, but preserves precious relics and monuments for history and geography alike. Learned geographers hold various opinions on the general character of the part of Northern Mongolia lying northward from Khangai. What European traveller has omitted to record the depression which its aspect caused him? But looking at the map of the places traversed by us, and taking into account the geographical, ethnological and historical associations of the spot, we at least found it impossible to say that the only way in which we were affected by it was "a profound depression."

North of the desert lies the elevated tract of Khangai, from which flow several considerable rivers; the Onon and Kerulen to the east, the Selenga with its numerous tributaries, and the Orkhon to the west. The Valley of the Kerulen, from whence first came the great conqueror Chinggis, and that of the Orkhon where he established himself in the seat of the earlier Naiman-Keraits, played for centuries a prominent *rôle* in the history of the peoples of Central Mongolia.

"Reading the history of the Tartars," says Abel-Rémusat, "one sees that the country east of the Altai Mountains and south of Lake Baikal was always the very centre of the might of the Turk and Mongol race. In all probability in this region are united all those qualities with which nature or chance endows those lands of high destiny, which are to become the rallying ground of surrounding nations." To quote a Chinese historian (Sheng Yu-tze): "Khorin, north of the vast Shamo, south of the Khansai Mountains, north-west of the River Orkhon, was the ancient dwelling of the Huihe (Uigurs). Here was also the chief abode or the Northern Hiung-nu. Here everything seems to have conspired to form an Imperial centre in Hanghai."

Such is the opinion of some but not of all. The celebrated Richthofen, without doubt the best informed writer on the topography.

of Asia, considers this region a steppe useless for cultivation, deprived of water-springs. Amazed at Ogotai choosing such a site for a capital, the noted geologist exclaims "Never did caprice of a prince lead to the selection of a less fitting spot. With the disappearance of population all traces of culture were bound to disappear as they have done." Neither of these conflicting views is without foundation.

It is true that the plateau of Mongolia, elevated between 2,000 and 4,000 feet above the sea, with ranges of hills destitute of forests and with bare, treeless plains, feebly watered by scanty rivers and streams constantly growing less, appears to a civilised European unfavourable. This I can confirm from my personal impressions during my travels on the Orkhon. The further we left our own frontier behind us, the more sharply accentuated became the character of higher Mongolia. The woods which we had seen before on northern slopes of hills, disappeared. The part between Khora-Gol and the Tola, which we took nine days to traverse, presented a high-lying desert with streams dried up, a desert waterless to such a degree that sometimes our horses on long marches had fresh grass to eat, but nothing to drink. Only the Mongol who is prepared for what lies before him can cross this land. Huge imposing ranges, like the Zamar, were bare and unwatered by a single rill. Only on the Tola and at the mouth of the Orkhon appeared a few willows, to be at once succeeded by the bare desert. Lake Ugei-Nor had no vegetation round it but rushes; the lakes scattered here and there are called Tsuhong-Nors, from their white colour and their great saltness. Only near the sources of the Orkhon appeared woods on the slopes; the sources themselves are in an Alpine country abounding in trees and bushes. But a country so depressing and miserable to our eyes was quite otherwise for the nomads, who found, and still find here, the free life of the steppes and wide pastures. Especially attractive to the nomad is a country like the Valley of the Orkhon, 80 versts south of the Ugei-Nor, widening there to 30 or 40 versts and forming a steppe. Here the Mongol monarchy, which liked the steppes and enjoyed their unfettered life, chose its place of residence. From the tops of the Khotond range, 4,000 to

5,000 feet high, we admired the panorama of the Valley of Khora-balghassun. Here was the abode of Temir Khan. Here equally clearly stood out the towers of the ruins of Khora-balghassun, the palace of the Mongol Khans; the broad panorama was closed north and south by distant mountains, from one side rising over Lake Ugei, from the other over the monastery of Erdeni-Tszo, 70 or 80 versts away. This extensive prospect was doubtless sweet to the Mongol rulers, whose spirit loved to rule the steppes and whose eyes loved to range over such distant views. Here were developed their ambitious plans of ruling the world. On the other hand the villages of Khangai and the treeless mountain slopes were to the taste of the nomads and in accordance with their habits of life. They were comparatively rich and luxuriant after the true desert, Gobi, where the nomad had earlier struggled for his existence. The Orkhon and Tola valleys seemed inhabitable to the nomad and even to the Chinese. The descendants of Chinggis Khan cultivated the land, and the Chinese military colonies followed up what they had begun. Chang Chun tells us that before the time of Chinggis there were cultivated fields and stores of grain on the Orkhon. We found a Chinese inscription of the Ministry of Agriculture. On the Djermanta River are still traces of irrigation works. Manzu Yamadzi says that on this river was a colony of men of the Green Banner, and that before the Kuan Taitsu the plough cut here as on the Orkhon and the Kokshin Orkhon. Of all the valleys that of Dolalkha-Talagrin was evidently the most flourishing. Chinese colonists are still moving along the Orkhon. We found their houses at the mouth of the Khora-Gol, at Tro, Shiro, and on the road from Urga to Kiakhta. Here they are contented to earn a scanty living from patches of land at which a Russian peasant would look with disdain. The first European travellers who set out in quest of Karakoram were two parties of Dominican and Franciscan friars, sent thither in 1245 by Pope Innocent IV, after the Council of Lyons. Their object was to learn all they could about the growing Tartar power and also about countries hitherto unknown to Europeans, and they expected to find Karakoram, their destination, close to Lake Baikal. The first of these two missions, the Dominicans,

went as far as Syria by sea; through Mesopotamia and Syria they arrived at Kharasan, where the Mongol colonel Batchu met them; they returned without any one of them having reached Karakoram, but Andrew Lanjamel or Lungumel.

The second mission, the Franciscans, were ordeaed to make their way across Europe to Batu Khan, prince of the Kiptchaks. From Germany they proceeded along the Dnieper to the frontier of this Tartar Khanate, and arrived at the headquarters of Batu Khan, who gave them a guide for Karakorum. East of the Ural River they traversed the Khirgis Steppes, and went through the town of Oniel (founded by the Kara Khitans) east of Lake Balkosh on the River Emel. Thence to Lake Uluingar, where at that time lived a horde of Nomans, and at the end of July they reached the residence of Khakan, heir-apparent of Ogatai, South of Karakorum. One of the members of this mission was Plano de Carpini; he wrote a description of the manners and customs of the Tartars, which is supplemented by some observations by his companion traveller, Benedict of Polshi. Gaston, King of Armenia also journeyed to Central Asia about that time; in 1254 he reached Karakorum, where he remained six weeks. Gaston Garison, a third son of the same royal house, travelled to the same capital likewise and has left us a description of what he saw. The most important of all these missions, however, was that of the Franciscan, William Rubruquis, who left most detailed and circumstantial accounts of his route. The crusade organised by St. Louis in 1248 was what led to the sending of this mission. In 1254 the French king determined to send two missions to Asia, one through Armenia, Persia and Turan, the other across the Russian and Khirgis Steppes. The first was conducted by the monk Andrew; no account of it is extant; the second by Rubruquis and Kermon. Rubrik, or Rubruquis, was in the Crimea when there were still Goths there. He passed close to the Sea of Azoff, visited the country of the Nomans, the residence of Tortak, proceeded to the Volga and visited the camp of Batu Khan. His accounts of all these place are of great value. Finally he came to the Ural Mountains, north of which lies the country of the Poskater (Bashkirs). This nation spoke the same language as the Hun-

garians. Further on he went through the Khirgis Steppes and down the Valley of the Talos. On this side of the Talos was the kingdom of Manga Khan. He also visited the town of Ekivius, near the modern Takmak, went along the Valley of the Ili, dotted with the ruins of the towns overwhelmed by the Mongols, ascended to the upper waters of the Irkytsk, and went up the Gobkhon River to Mongolia. Here he found the great Mongol high-road and station. The mission came on the tents of Manga Khan, pitched in a vast plain like a sea. There were European prisoners among the Mongols; a woman from Metz married to a Russian, and a Frenchman, Guillaume Baucher, a goldsmith. The mission went on to the upper waters of the Orkhon and to Karakorum. They found in that city twelve heathen temples, two mosques and a Christian church. The inhabitants were Tartars, Saracens and Chinese. Not much farther on, in a town surrounded by an earthern wall, were the palace and court of the Khan. With the French flag unfurled the mission entered the Mongol town after its long and painful journey. The Nestorian community came solemnly out to meet them and escorted them to a Christian church, where a mass was performed. Rubruquis has left very curious details of his stay with Manga Khan, of Karakorum and the magnificence of the Court of the Khan. Roads with regular resting-places—Norin-yang—were constructed to this capital, Karakorum, the Ho-lin of Chinese writers. Marco Polo says its circumference was three miles, the Chinese that it was five *li*. Rubruquis compares it with Saint Denys. There were two streets, several bazaars and residences of State secretaries and of the princes. The town was surrounded by settlements of artificers, gold weavers and landed proprietors. It lasted up to the Mongol times. Originally founded by the Uigurs in the eighth century, it was subsequently ruled by the Khokas destroyed by the Kitans; and Anaki, the founder of the latter power, erected here a monument on which was engraved the story of his exploits. The Chinese Manza Yu-madzi mentions that in Karakorum was set up a monument to the Tukinez Khan. Ho-lin played a part in history long after the fall of the Mongols and the Chinese made more than one campaign against it. Timur Khan, when driven out of China, raised a new

city in the valley of the Orkhon and restored ancient Karakorum. On the position of this city there exists an entire literature. Five different places are assigned as its site. Thus Abulgazi locates it in the sources of the Yenissei and Selenga Rivers; Fischer, south of the Orkhon not far from the Rivers Tola and Kerulen; Poter, Gobel and d'Anville fix it in 44° 21′ north latitude and 103° 40′ 30″ east longitude. D'Anville opines that it lay somewhere near Laka Karakhak—Ulen-nor—and De Guignes also adheres to this view. Abel-Rémusat, however, brought to bear such a mass of geographical and historical data from ancient Chinese sources, that the position of Karakorum between the Orkhon and the Tamir, north of Khangai and South of Lake Ugei-Nor, was quite evident. Abel-Rémusat fixes it in the longitude and latitude of Khora-balghassun. Father Hyacinth and Klaproth also place it on the Orkhon.

The researches of Abel-Rémusat were confirmed by the routes and journals of the Chinese Chan-ch'un and Chan Dak-Le, which were made public later on. The latter gives most exhaustive data for the determination of the true site, and M. Paderin, who started from Urga, treading in the steps of this Chinese traveller, and discovered the ruins of Khora-balghassun, thought that the journal of his predecessor was written with great veracity and accuracy. Unfortunately M. Paderin had not maps and could not take the bearings of these ruins as he wished to do. He locates them six or eight versts from the Orkhon. Manifestly he did not reach that river, but was only conducted from the road halting-station as far as the ruins. But he described the Dalalkha-Talagain valley very truly, and there is no doubt that he went there. Schmidt, the commentator of Rubruquis and Colonel Yule, who knew so well the literature of Karakorum, acknowledged the importance of Paderin's discovery. The question, however, has been lately raised again. Professor A. M. Pozdnéef has discovered from Mongol annals that the Mongol monastery Erdeni-Tszo, was founded on the site of the capital of the Ogotai, where Timur Khan founded a new capital, and Abotai Khan this monastery in the new town. This new view contraverts the opinion of M. Paderin, but it has at the same time

given a fresh incentive to the collection of accurate information about the position of the ruins in the Valley of the Orkhon.

The first ruins that we ourselves found were on the River Tola. Here was the beautiful palace of Irkhe-Mergen-Sain-Kundauze, son of Abotai Khan, in the 16th century. A monument and a stone with an inscription in Mongol and Thibetan testify to this. We were unfortunately without means of photographing it, and could not copy it; but I begged the Consul at Urga to try and get it copied by some learned lama. We found the ruins of a monastery on the Kharakha, and some more ruins south of Ugei-nor. Five versts beyond that lake, and south of an affluent of the Khol, rises the hillock called Tashin-chil, which appears to be the remains of a large building with granite foundations. Fifty versts south of the Lake Ugei-nor and a verst-and-a-half from the Orkhon, we found the ruins of Khora-balghassun and the remains of a palace surrounded by a clay wall. This city was three versts long and two-and-a-half wide. Near the palace was discovered a dilapidated granite monument, with sculptured dragons and inscriptions in that enigmatical language written in which we find inscriptions on stones and rocks in the Minasinsk district, and in southern Siberia. Similar inscriptions were discovered not so long ago in caves in Tarbagatai, on some silver vases and vessels in the Biat-skoi district, and at the Minasinsk "pai-tze," which Klaproth tried to read. Chinese inscriptions also occurred with those others. We copied both kinds and we obtained two fragments of stones with these carved characters, which we afterwards handed to the Imperial Archæological Committee. While engaged with topographical work at Khora-balghassun, we ascertained by enquiring of Natives that at a distance of some versts away, at Lake Tsagan-Nor, in a picturesque locality, are to be found the remains of the palace of the Princess Toiten, whom tradition makes the wife of Timur Khan. Our guide next led us to the Khotond Mountains where also we met with old monuments and an octagonal tower of Temir Khan. At this point a fine panorama of the Dalalkha-Talagain valley spread itself before us. In this valley at the foot of Erdeni-Olo, we saw the ruins of a village six versts from those of Khora-balghassun, and the principal.

Returning to Khora-balghassun, we ascended the River Djermanta, crossed the Uling-Deba Pass and entered the Alpine region of Khangai; on the third day we were at the foot of the Sobur-Khoirkhon, a mountain with patches of snow upon it, from which were visible the sources of the Orkhon, forming a lake cupped on the slope of a hill. After observing this country we left the Alpine region close to the Tsitserlik, a tributary of the Tamir. Following up along the Djermanta, we saw also ancient remains of buildings and a multitude of tombs and Kereksurs, and where the river meets the Khara-Khudjir we came upon remains of irrigation and stone *bulo* for threshing and grinding corn. South-west 35 versts from the Djermanta we found the hot iron-water springs mentioned in old Chinese maps, where was a temple and ten baths, near which we admired some conduits hewn in granite, which once adorned a tank or cistern. Here probably were the Khan's baths. The adobe walls of some buildings around the hot springs were still standing. High up the Djermanta River at Tsogansuma and Kak-suma we again found traces of buildings. Evidently there was once a population there. Nearer to the Monastery of Erdeni-Tszo and Kokshin-Orkhon we found also vestiges of ramparts and ruins of houses, which once formed a town, now called Khonzyu-khoto. In the monastery itself were a great number of antiquities with inscriptions in Chinese, Arabic and Mongol characters; these have been disfigured by the lamas, who have drawn over them pictures of their Buddhist legends or have used them for foundation stones in building temples. This wealth of antique relics was unexpected by us, and only showed that we were in a valley once thickly populated almost up to 80 versts from the Ugei-Nor. This is confirmed both by Chinese annalists and by Mongol history. Chan Chun saw ruins of towns in the Valley of the Orkhon. At the time of Chinggis Khan there were on the Orkhon River a military colony and a small town, called Djin-khoi-chen, under the command of Djin-khoi, who had under him 300 houses of goldcloth-weavers from western regions and 300 of wool-weavers from China. Artificers were brought hither from Turkestan after Chinggis Khan's campaign in that country. Another traveller, Djin-Do-Khai, mentions Chinese ruins on the

Tola, and the hamlets Bibe-ke-du, where lived makers of bows for shooting. Ogotai Khan in 1234 (the 7th year of his reign) threw walls round the Karakorum built by the Uigurs, and built there the palace of universal peace. In 1236 he removed to another palace—King Kiang-tisa, 70 *li* north of Ho-lin, where was the town of Fu-lin. The following year was laid the plan of a palace 30 *li* from Ho-lin, and here the local government was located, but it was afterwards shifted to Ho-lin.

There are several mentions of residences of princesses, wives of Khans, by travellers and annalists. In view of all these reasons for the valley of the Orkhon becoming a centre of population, the numerous traces of habitations having existed there need no surprise. Karakorum, or Kholin, was in Mongol times 100 *li* S.W. of Lake Ugei-Nor between the Tamir and the Orkhon ; this I have already stated is evident from the historial data, and just here we found extensive ruins. The name Khola has also been preserved here; some rivers falling into the Orkhon bear the ancient appellation of Norin. Lake Tsetsek-Nor (lake of flowers) by which the Khans hunted, is near the Djermanta, and another lake, Tsagan-Nor, also still retains its ancient name.

Finally, history tells of a mountain, Ku-li-ta-ha, or Kut-tagh. Raschid Eddin and Chinese authors both mention it. It lay near another mountain, Ute-ken, Tah-wei-kiong, or as Abel-Rémusat conjectures, Tu-hing. The names of these mountains survived from the time of the rule of the Tuküe and Khoi-Kho of the Uigurs. These were "mountains of happiness," as the welfare of the kingdom depended on them, and when the Chinese by stratagem took from the Uigurs those pledges of heavenly protection, Uini-lun, 13th king of the Uigurs, died, and his people were scattered. The same legend of mountains, with which the happiness of the state is bound up, is still told in the Dalalkha-Talgain Valley of the mountain Erdeni Olo, which is near Khora-balghassun, and Karakorum lay at the foot of this mountain.

Thus geographical testimony and ancient tradition alike point to Karakorum having been just hereabouts. Perhaps the inscriptions discovered will further go to clear up this point. Fifteen versts

from Khora-balghassun we came upon sumptuously built tombs adorned with statues and with stone tablets. On these tablets were as many as 40 lines of Runic characters, along with Chinese, which will perhaps yield information of weighty import. Finally, as Colonel M. V. Péotsoff's survey showed Lake Ugei-Nor to lie in 47° 47′ 23″ N. Lat. and 102° 45′ 25″ E. Long., we conceive Karakorum to lie at a point of which the geographical co-ordinates would be 47° 15′ N. Lat. and 102° 20′ 15″ Long. east of Greenwich.

Passing from the Mongolia of the past to the Mongolia of the present we would say a few words on our relations with that country. We are brought into relations with it perforce as a considerable portion of it is conterminous with southern Siberia. Through Mongolia goes our road to China; at Urga, Uliassutai and Kobdo there are already Chinese merchants; through Urga the tea of China is brought to Kiakhta. Mongolia can no longer threaten Europe or us with the invasion of her hordes,—the Mongol is now slave of China; under the influence of Buddhism which reached her through Thibet, the moral, spiritual aud economical aspirations of Mongolia have undergone a great change. Everywhere on mountain and plain, side by side with the yourts of the Nomads, are found lama monasteries or kurens, which form centres for settled life to group itself around, and spread their influence over the entire surrounding population. Chinese influence is seen in Mongolia both in the adminstrative sphere and in the economical or tradal. Chinese fashions have impressed their stamp on Mongol existence; the Mongols wear Chinese textures, use Chinese industrial productions, and Chinese traders settle under the walls of Mongol monasteries. In Urga, that prime centre of Buddhism in north-east Mongolia, numbering 10,000 monks within its walls, two conflicting civilisations are seen together striving for the mastery. Lamaite purism and pietism with Chinese rationalism, practicability and animal epicureanism. The Chinese is more cultured than the Mongol, but he exercises no intellectual or moral influence over him; in those domains the Thibetan monk occupies the first place. The grafting of Buddhism on Mongol life showed an awakening of

moral and spiritual aspirations in that people. Buddhism among the Mongols must be considered a step onwards in civilisation; a greater step lies before the Mongols when they become subjected, as they must soon, to the influence of European civilisation instead of Thibetan and Chinese. Whence is this influence to come? Evidently from the Russian outposts of civilisation near Mongolia's frontiers; such centres as the towns of Kiakhta, where were concluded our treaties with China, and the Russian factories in Chinese towns, as for example in Urga. It is a pity that notwithstanding relations of long date and several treaties concluded during the last century, the influence of our civilisation on our neighbour Mongolia has been so insignificant. Time, however, is doing its work, Russian productions are finding their way in greater and greater quantities into Mongolia. We found there Russian axes, Russian nails and Russian woollen cloth. The Mongol shares in the Kiakhta trade both as a middleman and as a carrier. On the borders relations have been placed on a solid basis. Urga has a Russian Consulate-General, established for the support of our countrymen and their commerce. Between the Chinese Maimatchin and the lama temples of Urga have arisen Russian buildings, the residence of a consul, and a Russian church. It is proposed to institute there a school for interpreters. Russian bridges are being built over Mongolian rivers, and it is hoped that soon regular Russian stations will be established between Urga and Kiakhta. There are Russian shops in Urga, and there can be seen specimens of our products. These will no doubt acquire a more extensive sale in Mongolia in proportion with the increase of manufacturing activity in Siberia. But although in the purely economic sphere we have not yet gained many triumphs, we have a power to help us, the power of enlightenment and real civilisation, which will yet be triumphant over the lamaism and Buddhistic influence which yet hold the field. In this coming conflict we have useful allies in our native fellow-subjects east of Lake Baikal, the Buriats, who now present an interesting example of a growing civilisation yet in a transition stage between nomadism and settled agricultural and commercial life. These Buriats, who have something of the Mongol

and something of the Russian, form a conecting link between the two peoples, and through their intermediation Mongolia is constantly gaining a better knowledge of what Russian nationality and Russian culture mean.

Of late unnecessary alarm has been expressed about the spread of Buddhism and lamaism in the Za-Baikal territory, or Transbaikal, the region lying east of that immense lake. These apprehensions are founded on false conceptions of the situation. Although Buddhism may have gained ground there in the very remote past, there is nothing to fear from it in the future. From our own ethnographical observations of the life of the Buriats and other natives of Za-Baikal, we are convinced that lamaism there is not to be compared as a force with lamaism in Mongolia. There it is lord and master of the land, here only a tolerated guest and stranger in the land. The leaven of lamaism was laid in Mongolia by learned and saintly Thibetan monks. The influence of Thibet in our Siberian territories was never powerful and the propagandists of lamaism among our Buriats were and are Mongols, the most simple and ignorant of men. The peaceful contest between lamaistic Buddhism and Christian civilisation will on that account alone be waged with far greater advantages for the latter in Transbaikal than farther south, and her triumph will be far easier. The lamas at work among our Buriat fellow-subjects are distinguished by absence of fanaticism. Those whom we met in the district of Gusino Ozero showed a remarkable spirit of loyalty, hospitality and courtesy to us and other Russian travellers and guests. They are not only obedient to our officials, but they are displaying of late a more marked desire to gain a clearer knowledge of our civilisation. They learn to read our books; Russian photographers are allowed free access to their monasteries, as is proved by the mass of photographs taken by M. Charushin. The Transbaikal Kombo Lama, D. G. Gomboyeff, supplied the museum of the E. S. Branch of the Geographical Society with a quantity of objects pertaining to the Buddhist cult, and thanks to this liberality, last winter, the Branch held a great exhibition at Irkytsk comprising 600 objects, original or copies. Ten lamas are enrolled as members of the Society.

On such studies the Christians and the Buddhists are on common ground, and as the eyes and ears of the Buddhists are not here closed by fanaticism, there is every hope that the spirit of Christian patience, gentleness and love will in the end prevail. Believing in the life-giving power of the higher Christian civilisation, in its humanising influence, in its indestructible might, we are convinced that the Mongol world will, by the help of the friends of enlightenment, come to feel that influence, and the history of Mongolia, as savage Mongolia, will come to an end for ever.

At the conclusion of the paper Mr. KINGSMILL said the portion of Mongolia referred to must always remain a country of wonderful interest to all enquirers into the history of the ancient tribes of the world. It was in this country that the changes from which modern civilisation and history have been evolved, commenced. There was nothing extraordinary in the Russian travellers finding Runic monuments in this region, because there in the dawn of history dwelt a people of Teutonic or Scandinavian connections. In fact it was probably from these regions that our own ancestors, the Saxons, came. It was there that Alexander the Great stopped in his conquest of Central Asia, and the last chief with whom he had a contest was a man who bore a singularly Teutonic name. The Chinese described the people who dwelt in Mongolia as a fair race with blue eyes. These people were subsequently dispersed by a Turkish tribe, who, in the ancient ages of the world, began to emerge from this part of Asia. Traces have been found in Mongolia of some very old Turkish tribes, who in the second and third centuries attacked the eastern flanks of the Roman Empire. In those days Mongolia was well wooded and watered, but the early Chinese settlers who came into the country cut down the trees, made roads, drained the marshes, and generally cleared the land for the purposes of settlement. Afterwards the face of the country assumed the aspect it now presents, that of an arid desert with scarcely a tree or a stream of water. Mr. Kingsmill concluded by saying that Mr. Fraser deserved the most sincere thanks of the Society for translating the very interesting paper of the Russian traveller, and he would like the Society's appreciation of the trans-

lator to be recorded upon the minutes. It was a fortunate thing for the Society that they had a member capable of translating information from the Russian.

General Mesny remarked that he noticed several Turkish names in the very instructive paper read by Dr. Edkins, though to judge by it the people to whom it referred were not Turks but Mongols. There are plenty of people, however, in Mongolia possessing blue eyes and light complexions, resembling generally the people of modern Europe in appearance, and still they all speak a dialect of Turkish.

Dr. Macgowan said he must felicitate the Society upon having a member conversant with the Russian language. This was the second or third paper Mr. Fraser had translated, and a good deal of valuable information is to be derived from Russian sources, a fact of which Mr. Fraser is evidently very well aware. Especially the modern researches published are of great interest to us, and fortunately in Mr. Fraser they had a person capable of giving them to the Society, and he seconded Mr. Kingsmill's motion with great pleasure. He referred to the Buriats and Uigurs named by Mr. Yadruntseff. He met Russianised Buriats in Transbaikalia, and heard much respecting these who are still Buddhists. These Mongols are interesting and are the most promising of the Asiatic peoples who go to make up the heterogenous Russian Empire. Concerning the Uigur Turks an interesting discovery has just been made showing that the Turks had effected their way to the sea-coast. Just as Dr. Macgowan was leaving Vladivostock there came into the possession of Mr. Sheveleff a stone slab bearing an inscription apparently in Uigur. The doctor printed a photograph of a portion of the inscription, which he has now presented to the Royal Asiatic Society. A complete copy was to be sent to Petersburgh, where no doubt it will be correctly deciphered.

The Chairman said he was quite confident the proposition made would be accepted by the Society with the greatest cordiality. Personally he thought it was as interesting a paper as he had heard for a long while, and it had called forth as interesting commentary in the remarks of Mr. Kingsmill and Dr. Macgowan as he had heard.

They must all be most grateful to Mr. Fraser for having translated the paper and to Dr. Edkins for having read it, and he need hardly say the vote of thanks would be fully recorded on the minutes.

The proceedings then terminated.

MINUTES *of a* GENERAL MEETING *of the China Branch of the Royal Asiatic Society held in the Society's Library, on Monday, 15th February, at 9 p.m.*

Mr. N. J. HANNEN (President) occupied the chair.

The CHAIRMAN, after briefly opening the proceedings, called upon Mr. Z. VOLPICELLI (Hon. Secretary) to read his paper, entitled "Wei-Ch'i."

Mr. VOLPICELLI then read his paper, which is printed *in extenso* pp. 80-107 of this volume, illustrating his observations by frequent demonstrations on a large diagram attached to a blackboard. He said that wei-ch'i is the great game of China. It is considered by the natives of this country to be far superior to their chess (which is but slightly different from ours) and to be the special game of the literary class, while the military men amuse themselves with hsiang-ch'i or chess. These facts naturally arouse our curiosity, because we are so much accustomed to regard chess as incontestably the royal game, that we wish to examine the merits of the unknown rival which destroys all our preconceived notions about the precedence of games. We find on examination that wei-ch'i does possess interesting features and requires great skill in playing. It has for us the merit of absolute novelty, because it differs essentially from all the games we may have learnt. Unlike chess or draughts, the men are never taken but remain where they are played. The game is not a series of skillful evolutions but a successive occupation of points which, joined together, give a final winning position. Though the game is on a very extensive scale, the board containing 361 places (while our chess-board has only 64), and the men employed being nearly 200 a side, still it is very simple

in principle, all the men having the same value and the same powers. The elements of wei-ch'i can be learnt easily, and one can very soon play without infringing the rules—much sooner than one can with chess. This simplicity, however, does not deprive the game of that charm which is found in the exercise of skill. To achieve the object of the game on such an extensive board requires great foresight and profound calculation. The object in playing wei-ch'i is to occupy as much space on the board as possible. He who at the end of the game commands most places has won. This object can be carried out in a twofold manner: by enclosing empty spaces on the board with a certain member of one's men, and by surrounding and capturing the enemy's men. The name wei-ch'i comes from wei, meaning "to surround." Though it is so easy to state in general terms the object the wei-ch'i player has in view, it requires great skill to effect it, if he is matched with a good adversary. While he is trying to surround the enemy's men, his are being surrounded by the adversary's, and this often occurs in the same part of the board, so that the men get interlocked and the position of one additional man may turn the scale of victory. As there is no piece of vital importance like the king at chess, and as the object of the game is of a general arithmetical character—to secure most places—one need not get discouraged if one loses in one part of the board. The places lost there may be compensated by surrounding the enemy in another quarter; so that wei-ch'i instead of concentrating the attention of the player in one spot as in chess, on the king, diffuses it all over the board. Very nice calculation is, however, always necessary, so that one may balance the losses here with the gains there. Wei-ch'i, which originated in China, has been carried to all those countries that have been influenced by Chinese civilisation. It is played in Corea and Japan. Owing to its simplicity it has changed little in its migrations and is played almost identically in China and Japan, while Japanese chess differs from Chinese as much as from European. In Japan the game is called go-bang (not, however, what is called "go-bang" by foreigners) and has been always in high favour. In the feudal days the great nobles had celebrated players attached to their households and were

as proud of them as of their bulky wrestlers. It is to be hoped that this interesting game may be appreciated in Europe, where, if we are correctly informed, some steps have already been taken to introduce it, its practice having already been begun in Germany.

The CHAIRMAN observed that just in the same way as it was said of wei-ch'i that the interest was not confined to one particular corner of the board, so it might be said with regard to chess, in which not only does the player attack the enemy's king, but other places as well. Wei-ch'i reminded him of a game called "reversis," in which the men are not captured, and in which much the same spirit of contrivance and foresight is required. It was very much more than he could do to understand the game fully from hearing it once described, but they would all feel the greatest interest in reading the paper when it was printed in full.

Mr. T. W. KINGSMILL remarked that wei-ch'i has very much in common with the schoolboy game of "fox and geese."

Dr. EDKINS said the game was first mentioned in Chinese writings about B.C. 625. At that time it was played, among other places, in Honan. The number of the squares showed it was likely to be a favourite recreation of mathematical pupils, and that it was probably derived from the Babylonian astronomers, who were at that time the teachers of the East. Chinese emperors have been very fond of this game, though it subjects them to the necessity of forgetting their rank, and those who play with the Emperor sit in his presence. It is recorded of Chi-kao, an Emperor of the 4th century, that on one occasion he made a move irregularly. The courtier who was playing with him held the monarch's finger, and the Emperor was not offended. This was thought important enough to be mentioned in history.

The PRESIDENT having announced that a vote of thanks would be recorded in favour of Mr. Volpicelli, the meeting terminated.

MINUTES *of* PROCEEDINGS *at a* GENERAL MEETING *held in the Society's Library, Museum Road, on Wednesday, 30th March 1892, at 9 p.m.*

Mr. N. J. HANNEN (President) occupied the chair.

Dr. EDKINS read a paper by Dr. de Groot, late of Amoy, on "The Militant Spirit of the Buddhist Clergy in China," which is printed *in extenso* pp. 108-120 of this volume.

Dr. DE GROOT's interesting paper contained a very exhaustive account of the different instances recorded in Chinese history in which the Buddhistic clergy engaged in actual warfare. Many of the clergy distinguished themselves so much in this new capacity, that they were even put in command of large forces. They engaged sometimes in defence of the throne against rebels, and in other instances they sided with the insurgents, while in other cases they took up arms simply to put down local disturbances, or to defend their temples, or to repulse the attacks of the Japanese. They showed great fidelity and indomitable fortitude. The monk Chenpao [A.D. 1126] after struggling gallantly against rebels, was captured, but though every inducement was offereed him to take up the cause of the rebels, he answered: "Our law forbids us to betray our trust. I have promised the Emperor of the Sung dynasty to die for him; how can I violate my promise?" and he cheerfully suffered death by the sword. Another Buddhist priest, the octogenarian Yuen-tsing, being made prisoner, was condemned to have his foot chopped off. Not only did he show no fear, but when the executioner failed in his stroke, he taunted him for his want of strength, and put his limb in a better position, so that the work might be done properly.

Besides engaging in warfare the monks have often practised warlike arts in times of peace. The convent of Shao-lin was famous for its cultivation of fencing, and a manual on that art was published by one of its inmates prior to the seventeenth century. In the Ch'ung-cheng period (1628) when a rebellion broke out in Honan, the Governor entrusted the drilling of a body of troops he had raised to the monks of Shao-shih.

After quoting these instances Dr. de Groot showed how contrary they are to the spirit of the whole of the Buddhist teaching, which not only forbids killing and the encouragement of killing, but looking on at murder, visiting all these crimes with the *parajita* (expulsion), *i.e.* the individual guilty of such sins loses all prospect of ever being saved. Besides forbidding such crimes the Buddhistic doctrine forbids even the frequenting of armies or the carrying of messages between hostile forces. The respect for life is extended to all living things, and this principle is pushed to such an extreme that it is enjoined even to sacrifice one's life for the sake of other beings and to give one's body to hungry tigers. It is this principle, according to Dr. de Groot, which accounts for the occasional engaging in warfare of the Buddhistic clergy. Wars in China have always been carried on in the most merciless manner, whole regions have been devastated and the inhabitants destroyed without regard to sex or age. To prevent such reckless carnage, the monks have momentarily relinquished their rigid adherence to their rules forbidding all strife and even the possession and use of weapons. To this must be added the spirit of devotion to all authority, from the father to the Emperor, which is the basis of Chinese society and has been cordially accepted by the Buddhists in China, who, therefore, would in obedience to such a sentiment consent to take up arms to defend the sovereign, and in certain cases when rival claims were dubious, even to defend a usurper whom they might consider as the rightful authority.

The Chairman remarked that the interesting paper just read, showed that Buddhism, like all other religions, had not always been able to adhere strictly to its principles. All religions were founded upon universal benevolence and forbade bloodshed, but in many cases circumstances were such that men to defend all that they held most dear had to employ force and shed blood to put down lawless violence.

Dr. Edkins said that Dr. de Groot had referred to the circumstance that writers on Chinese Buddhism had not mentioned the militant spirit of the Buddhist clergy. In fact they are now peaceable and indisposed to fight. The Chinese government does

not look to them to furnish recruits to the army. Confucianism regards them as bookworms or white ants which waste the wealth of the state without in any way adding to it. This is seen in the Sacred Edict where the Buddhists are as a community condemned on this ground. Dr. de Groot had in his paper unearthed many passages which show that formerly the Buddhists have actually taken a share in the military defence of the state, but this has, if fairly considered, been only accidental, and on the whole the Buddhist priests must be viewed as belonging to the non-fighting portion of the community, and they are far from being regarded as the natural defenders of the public tranquillity.

Mr. Volpicelli said that Dr. de Groot's paper showed up Buddhism in a new light, and took away somewhat from the exaggerated claims of its supporters. Many supposed that Buddhism was an exceptional religion which had never violated its stringent rules. On his voyage homeward he had had frequent conversation with an enthusiastic Cingalese Buddhist—Mr. Dammapala. This gentleman, comparing Buddhism with Christianity, claimed for the former an undoubted superiority as the only religion which had never wavered in its principles and had always forbidden war and bloodshed, and pointed out triumphantly the many religious wars in Europe. The facts now brought forward by Dr. de Groot showed that Buddhism also had sometimes favoured warfare, if such action might be justified, in some cases as the inevitable choice of the lesser evil: the slaughter of the lawless few to save the multitude of peace-loving inhabitants. In other cases quoted by Dr. de Groot the recourse to arms had been adopted from selfish motives to save their temples and possessions. The action of religious bodies in times of strife depended more upon the character of the people than upon the principles they professed.

Dr. Faber added that the European admirers of Buddhism considered it in an ideal light and refused to take account of the features which might lower it in general estimation. Chinese history contained many more instances where Buddhism not only had engaged in strife but had even provoked it.

A speaker referred to an instance in Japanese history when the Buddhist monks engaged in regular forays like feudal freebooters.

Mr. LYALL enquired from Dr. Edkins if he could throw any light upon the fact mentioned by Dr. de Groot that a regular school of fencing existed in the convent of Shao-lin.

Dr. EDKINS replied that many riotous men joined the monkish community to avoid hard work. Food and clothing with nothing to do was a temptation to such men. They break the Buddhist rules occasionally and are expelled. If robbers should attack a monastery in a mountain spot and an exposed situation, such riotous monks would be the readiest to meet the robbers with a blow for a blow. Fencing would suit the monasteries in these circumstances and would be found most useful as a means of self-defence. It is a duty to protect, as Dr. de Groot said, the images, the books and the priesthood.

The CHAIRMAN closed the meeting by proposing a vote of thanks to Dr. de Groot for his interesting paper.

MINUTES *of* PROCEEDINGS *at a* GENERAL MEETING *held at the Society's Library, Museum Road, Shanghai, on Wednesday, 1st June 1892, at 8.45 p.m.*

Mr. N. J. HANNEN (President) occupied the chair. There were about 20 members and friends present.

The minutes of the last meeting being taken as read, the CHAIRMAN called on Dr. Edkins to proceed with the reading of his lecture on "The Growth of Language"

The lecturer began with laying down three rules of procedure in comparing families of language with each other:—(1) The sphere of ethnology is distinct from that of language because conquered races and absorbed nationalities learn the language of the conquerors. (2) The indestructibility of words. There is no limit in time to the lifetime of words. They may last for many thousand years, only they must have a clear significance and be marked by intensity of feeling or constancy of repetition. (3) Physiological control over all later changes is to be taken as a fixed law. These

three things premised we may proceed to compare the languages of the Continent of Asia with each other.

The families of language in Asia are nine: 1 Chinese, 2 Japanese and Corean with Aino, 3 Manchu, Mongol and Turkish, 4 Tibetan and Burmese, 5 Annamese and Siamese, 6 Indo-European, 7 Semitic, 8 Dravidian, and 9 Malay.

The Chinese is the most primitive among these. We see in Shanghai among the natives about two thousand imperfect speakers of English. They pronounce it most of them wretchedly because they have not a command of a large number of separate sounds. On the other hand Europeans speaking Chinese pronounce fairly well because they find the sounds not difficult to imitate. This shows that Chinese is primitive in type and old, while European are the most competent and perfect languages existing in any part of the world.

Yet China has made great achievements in language, as her large collections of words show. Her vocabulary in agriculture, politics and social questions, in medicine and the arts, is very voluminous. But she did not get beyond the monosyllable. The polysyllabic growth of language is due to the nomad races. The process was probably of this sort. Agricultural vocabularies are spoken with local accent. But if the speakers become nomad they move to new markets at a distance and all local accent is then useless; then they repeat a word or use a synonym to make the bargainer understand. This is a movement in the direction of polysyllabism. We see the same thing among the Chinese themselves who are heard repeating words when they explain the Confucian books in modern colloquial. Two words take the place of one. This then is the origin of polysyllabic speech. It is caused by the removal of speakers from agricultural life to nomad life. Agricultural life supplies words. Nomad life supplies forms.

Then the Indo-European languages were shown to be based on the Tartar. The Tartar languages were developed when North Asia had a warm climate and metallurgy and agriculture flourished in the basins of the Caspian and of the now Frozen Ocean. The Accadians were one with them at that time, and this appears to have been one of the early civilisations of the world. With the

stimulus then acquired the Accadians were able to do what they afterwards achieved in Mesopotamia. The fact that the Tartars and Accadians alike have the pronouns *me* and *mine* and the connected substantial verb *to be* shows this.

The lines of migration were then traced by the help of the names of the domestic animals, especially the dog, horse, and cow, and the words for cheese, butter and milk. By this means it was shown that there were about four latitudinal lines of migration from Asia to Europe, and that for example the Tibetan word for cheese being the same as that of the Greeks, a part of the Greeks might go from near Tibet westward through Persia to Europe. Certainly the many names of animals which are the same in Tartary and Europe show that there is ground for the view that the vocabulary of Europe and Tartary is identical; e.g. *Ogoli* (owl, in Mongol) is *Oglo* in Swedish.

The reason that the Tartar languages were able to attain this position of prominence in the development of European speech is found in an early civilisation in Siberia and the Caspian basin when the climate was warmer than it is now.

If words are really the same in the older system of language and in the newer, the etymology of words ought to be sought in Eastern Asia, where systems of human speech still exist of very antique type.

At the close of the lecture, the CHAIRMAN spoke of it in a highly commendatory manner. But in regard to the Japanese name for *dog*, which it had been stated was the same word with the English *dog*, he remarked that he entirely failed to see any resemblance. But in regard to this the attention of the Chairman was drawn to the circumstance that *g* is dropped, that *n* is really the source of *d*, and that *i* is prefixed just as the Japanese prefix *u* to the Chinese *ma* to make their name for the horse.

COUNCIL'S REPORT FOR THE YEAR 1892.

1. *Council.*—At the Annual Meeting held on the 22nd June 1892, the following members were elected office-bearers of the Society :—

N. J. Hannen, Esq.,	*President.*
P. G. von Möllendorff,	*Vice-Presidents.*
Joseph Edkins, D.D.,	*Vice-Presidents.*
J. Mencarini, Esq.,	*Hon. Secretary.*
Thos. Brown, Esq.,	„ *Treasurer.*
M. F. A. Fraser, Esq ,	„ *Librarian.*
D. C. Jansen, Esq.,	„ *Curator.*
R. E. Bredon, Esq.,	*Councillors.*
J. Ritter von Haas	*Councillors.*
R. A. Jamieson, M.A ,	*Councillors.*
T. W. Kingsmill, Esq.,	*Councillors.*
G. M. H. Playfair, Esq.,	*Councillors.*

In the course of the year some changes had unavoidably to be made in the Council; Mr. Fraser's departure from Shanghai rendered necessary the appointment of someone in his place, and the Society was fortunate enough in securing Mr. von Haas' services as Hon. Librarian. We had also the misfortune of losing the Hon. Secretary Mr. Mencarini, transferred to Foochow towards the end of 1891; his post was taken up by Mr. Z. Volpicelli. Dr. Jamieson, owing to pressure of other work, felt obliged to tender his resignation, and persisted in his resolution, to the universal regret of the Society. Dr. Faber was called to fill up the vacancy in the Council.

2. *Members.*—A considerable number of new members had been elected during the year and only a few resignations had taken place.

3. *Meetings.*—In the course of the year *five* Public Meetings were held, at which the following papers were read :—

"A Comparative Table of the Ancient Lunar Asterisms," by T. W. KINGSMILL, Esq.

"The Ancient Tombs and Burial Mounds of Japan," by Prof. HITCHCOCK.

"A Journey to the Upper Waters of the Orkhon and the Ruins of Karakorum [from the Russian]," by M. F. A. FRASER, Esq.

"Wei-ch'i," by Z. VOLPICELLI, Esq.

"The Militant Spirit of the Buddhist Clergy in China," by Dr. DE GROOT.

4. *Journal.*—This consisted exclusively of one communication, from Dr. BRETSCHNEIDER, the "Botany of the Chinese Classics," which had been considered of such interest and importance as to deserve to be printed by itself as a separate volume. This departure from our usual custom of issuing several fascicules during the year had been rendered necessary by the extent and unity of the work, which did not admit of its being published in parts.

5. *Officers' Reports.*—The Hon. Treasurer's report is herewith published, and it will be seen that the finances of the Society are, as usual, in excellent condition. The Hon. Librarian adds to his report a list of publications we receive in exchange for the Journal. The Hon. Curator informs us that he has nothing of moment to report about the Museum. On this last point it may be of interest to many to know that the Society is going to enter into negotiations for securing an able scientific man to undertake the duties of paid Curator of the Museum.

Z. VOLPICELLI,
Hon. Secretary.

Hon. Treasurer's Report.

Gentlemen,

In presenting my audited accounts for the year ending April 30th, 1892, it will be seen that the ordinary Income and Expenditure very nearly balance. The large item for "Repairs to the Building" has considerably reduced the balance brought forward from last account, but I consider our financial position to be very satisfactory, as there are still a number of subscriptions to come in, in addition to the proceeds of sales of the Journals made by the London agents.

THOMAS BROWN,
Hon. Treasurer.

Shanghai, May 10th, 1892.

THE HON. TREASURER IN ACCOUNT WITH THE SHANGHAI MUSEUM.

Dr. *May 1st, 1891, to April 30th, 1892.* *Cr.*

INCOME.	Tls.	cts.	EXPENDITURE.	Tls.	cts.
To Balance from 1890-91	512	57	By Wages of Taxidermist	303	13
„ Donation, from French Municipal Council ...	100	00	„ Interest on Loan from Recreation Fund ...	75	00
„ „ „ English „ „ ...	500	00	„ Insurance	5	62
			„ Rent paid to the C. B. R. A. S....	150	00
			„ Balance	578	82
Tls.	1,112	57	Tls.	1,112	57

E. & O. E.

SHANGHAI, April 30th, 1892.

Compared with Vouchers and found correct,

H. BECK.

A. W. DANFORTH.

THE HON. TREASURER IN ACCOUNT WITH THE CHINA BRANCH OF THE ROYAL ASIATIC SOCIETY.

Dr. *May 1st, 1891, to April 30th, 1892.* *Cr.*

Income.	Tls.	cts.	Expenditure.	Tls.	cts.
To Balance from 1890-91	492	36	By printing and binding Journals	579	92
„ Subscriptions	665	55	„ Postages	28	69
„ Rent from S. L. & D. S., etc.	58	06	„ Stationery	16	45
„ Interest allowed by Bank	13	67	„ Advertising	62	92
„ Account sales of Journals	91	20	„ Municipal Taxes, etc.	26	90
„ Rent received from the Museum	150	00	„ Repairs to Building	383	14
			„ Insurance	17	18
			„ Library Purchases	139	54
			„ Gas and Coals	16	13
			„ Gas Fittings	7	50
			„ Wages of Library Assistant and Coolie ...	83	65
			„ Shroffs, for collecting	10	87
			„ Balance	97	95
Tls.	1,470	84	Tls.	1,470	84

E. & O. E.

Shanghai, April 30th, 1892.

Compared with Vouchers and found correct,

H. Beck.

A. W. Danforth.

Hon. Curator's Report.

The Hon. Curator said he had no occasion to make a detailed Report, but stated it was absolutely necessary a paid Curator should be obtained to look after the Museum; for this purpose the Council intended to enter into negotiations with a Naturalist in South Australia.

Hon. Librarian's Report.

Gentlemen,

It is only since the latter part of the year under report that I have taken over charge of the Library of our Society, my predecessor, Mr. M. F. A. Fraser, having then been transferred to Foochow.

I beg to append a list of the contributions the Society received during 1891. Though many of these publications are for us of a less general use, the fact that we receive from different parts of the world donations shows, however, how much the working of our Society is there appreciated, as the donators always anticipate an exchange with our Journal.

Among the prominent contributors to our Library, I have much pleasure to mention the Administration of the Imperial Maritime Customs, and our Society may feel deeply grateful to this Authority for supplying us in the most liberal manner with a rich and valuable material.

We keep a regular and fair exhange with our sister (Asiatic) Societies in Japan, Cochin China, Java, India, Ceylon, England, France and Germany. Geographical, anthropological and zoological Societies, on the other hand, are those who take in our publications a great interest.

The list of private donations is unfortunately a short one. Few authors on Chinese subjects think of our Society, though we possess a Library which may be considered as one of the richest in the East. Its easy access renders often to those authors valuable information. Yet a great many books were published in 1891 of which we do not possess a copy. Our funds are too small to afford their purchase. Yet on the other hand the author must feel some satisfaction in knowing that his work is also represented in this Library. May these remarks be considered as an appeal to the different members of our Society who are writing on Chinese subjects that they furnish

their share in the enlargement of the Library. I think one reason for this is that our Journal does not give a review or critique of recent publications. Perhaps the incoming Council may consider it worth while to deal with this suggestion.

I am now working with the catalogising of our whole Library, whereby I keep strictly the arrangement made by Rev. Dr. FABER, one of our former Librarians. It is solely due to the hard work of this gentleman that the Library has been hitherto kept in such excellent order. The publication of a new catalogue will have to be taken into consideration during this year.

The Rules for the issue of books from the "Library" require a revision; a proposition to that effect will be submitted to the new Council. A strict adherence to these Rules is a *conditio sine qua non* if our stock of works has to be maintained.

I am, Gentlemen,

Your obedient servant,

J. VON HAAS,

Hon. Librarian.

List of Works added to the Society's Library during the Year 1891.

ASIA.

CHINA.

Shanghai:

Imperial Maritime Customs, Statistical Department:
Customs Gazette, No. lxxxix, January-March 1891.
,, xc, April-June ,,
,, xci, July-September ,,

Returns of Trade and Trade Reports for the year 1890. Part II. Reports and Statistics for each Port. With the Reports and Statistics for Corea. 32nd/26th Issue.

Do. do. do. In Chinese.

Medical Reports, for the Half-year ended 31st March 1889. (37th Issue) Special Series, No. 2.

The Chinese Recorder and Missionary Journal:
Vol. xxii, Nos. 5–12, May-December 1891.

Mémoires concernant l'Histoire Naturelle de l'Empire Chinois. Par des Pères de la Compagnie de Jesus:
Tome I. Premier cahier avec 12 planches, 1880.
Second ,, ,, 10 ,, 1882.
Troisième ,, ,, 10 ,, 1885.
Tome II. Premier ,, ,, 21 ,, 1888.
,, I. Quatrième et dernier cahier, (Planches xxxiii—xliii) 1890.

Bulletin Mensuel de l'Observatoire Magnétique et Météorologique de Zi-ka-wei, 1890:
1890 No. 192, August.
,, ,, 193, September.
,, ,, 194, October.
,, ,, 195, November.
,, ,, 196, December.

COCHIN-CHINA.

Saigon:

Bulletin de la Société des Études Indo-Chinoises de Saigon:
Année 1890, 1er semestre, 3 fasc. Saigon, 1891.
„ „ 2e „ 1 „ „ „
„ „ 2e „ 2 „ „ „

INDIA.

Calcutta:

Proceedings of the Asiatic Society of Bengal:
Nos. 1–6, January-June 1891.
Journal of the Asiatic Society of Bengal:
Vol. lix, part I, Nos. 3–4, 5, 1890.
„ lix, „ II, „ 2, Supplement, 1890.
„ lx, „ I–II, „ 1, 1890.
Records of the Geological Survey of India:
Vol. xxiv, parts 1–3, 1891.
Contents and Index of the first twenty volumes of the Records of the Geological Survey of India, 1868–87.
Memoirs of the Geological Survey of India:
Vol. xxiii, 1890.
„ xxiv, part I, 1891.

Bombay:

The Journal of the Bombay Branch of the Royal Asiatic Society:
No. 58, Vol. xviii, Bombay, 1891.

CEYLON.

Colombo:

Journal of the Ceylon Branch of the Royal Asiatic Society 1888:
Vol. x, No. 37.

JAPAN.

Tokio:

Mittheilungen der Deutschen Gesellschaft für Natur-und Völkerkunde Ostasiens:
Vol. v, fasc. 46, 1891.
Romgji Zasshi (a Japanese Romanised Paper). Files.

Yokohama :

Transactions of the Asiatic Society of Japan :
Vol. xix, part i, March 1891.
The Japan Weekly Mail. Files.
The Japan Herald Mail Summary. Files.

JAVA.

Batavia :

Notulen van de Algemeene en Bestuuro-Vergaderingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen :
Vol. xxviii, fasc. 4, 1890.
„ xxix, „ 1–2, 1891.
Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen :
Vol. xlvi, 1891.
Tijdschrift voor Indische Taal- Land- en Volkenkunde. (Published by the Bataviaasch Genootschap van Kunsten en Wetenschappen). Onder redactie Dr. J. Brandes and Mr. J. H. Abendanon :
Vol. xxxiv, Nos. 5–6, 1891.
Nederlandsch-Indisch Plakaatboek. By Mr. J. A. van der Chijs :
Part viii, 1765–1775.
„ ix, Nieuwe Statuten van Batavia. Batavia, 1891.
Dagh-Register, gehoudenint Castul Batavia :
Anno 1663. By J. A. van der Chijs. Batavia, 1891.

EUROPE.

AUSTRIA-HUNGARY.

Wien :

Mittheilungen der K. K. Geographischen Gesellschaft in Wien :
Vol. xxxii, 1890.
Mittheilungen der Anthropologischen Gesellschaft in Wien :
Vol. xxi, fasc. 1–3, 1891.

Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften.
Philosophisch-Historische Classe:
Vol. cxix-cxxi, 1889-1890.
Verhandlungen der K. K. Geologischen Reich-sanstalt:
Nos. 1–13, 1891.
Oestereichische Monatsschrift für den Orient:
Siebzehnter Jahrgang. Nos. 1–5, 8–9, January-May, August-September, 1891.

Budapest:

Bulletin de la Société Hongroise de Géographie:
Vol. xix, fasc. 1–4, 1891.

BELGIUM.

Brussels:

Bulletin de la Société Royal Belge de Géographie:
15e Année, Nos. 1-3, 1891.

FRANCE.

Havre:

Bulletin de la Société de Géographie Commerciale:
January-February, May-August, 1891.

Paris:

Revue Mensuelle de l'Ecole d'Anthropologie:
Première Année, Nos. 1–3, 9–10. January-March, September-October, 1891.
Bulletin de la Société de Géographie Commerciale:
Tome xiii, No. 2, 1890–1891.
Le Muséum National de Rio de Janeiro et son Influence sur les Sciences Naturelles au Bresil. Par Ladisláu Netto. Paris, 1889.
Conchyliologie Fluviatile de la Province de Nanking. Par le R. P. Heude.

GERMANY.

Berlin:

Sitzungsberichte der Kgl. Preussischen Akademie der Wissenschaften zu Berlin:
Vol. i–xl, 8 January–3 July 1891.

Verhandlungen der Gesellschaft für Erdkunde zu Berlin :
Vol. xviii, Nos. 4–5, 1891.

Zeitschrift der Gesellschaft für Erdkunde zu Berlin :
Vol. xxvi, Nos. 2–3, 1891.

Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte. (Redigint von Rud. Verchow) :

1890. Sitzung vom 15 November–20 December.
1891. Ausserordentliche Sitzung von 10 January.
„ Sitzung vom 17 January.
„ extra „ „ 14 February.
„ „ „ 21 „
„ „ „ 21 March.
„ „ „ 18 April.

Philosophische und Historische Abhandlungen der K. K. der Wissenschaften zu Berlin 1891. One vol.

Bremen :

Deutsche Geographische Blätter, herausgegeben von der Geographischen Gesellschaft in Bremen :
Vol. xiv, No. 2-3, 1891.

Leipzig :

Die Sprachwissenschaft, ihre Aufgaben, methoden und Bisherigen Ergebnisse. Von George von der Gabelentz, 1891.

Mittheilungen des Vereins für Erkunde zu Leipzig, 1890. One vol.

Zeitschrift der Deutschen Morgenlandschen Gesellschaft :
Vol. xlv, No. 1-2, 1891.

Frankfurt a/ Main :

Jahresbericht des Frankfurter Vereins für Geographie und Statistik :
53 und 54 Jahrgang.

Gotha :

Dr. A. Petermann's Mittheilungen :
Vol. 37, Nos. 3-9, 10, 1891.

Greifswald:

IV. Jahresbericht der Geographischen Gesellschaft zu Greifswald, 1889–90. Von Prof. Dr. Budolf Credner. Greifswald, 1891.

Königsberg:

Schriften der Physikalisch-Ökonomischen Gesellschaft zu Königsberg in Pr. 1890. One vol.

Braunschweig:

Jahresbericht des Vereins für Naturwissenschaft zu Braunchsweig, 1887–89. Braunschweig, 1891.

München:

Sitzungsberichte der mathematisch-physikalischen Classe der K. b. Akademie der Wissenschaften zu München:

1888, Vol. xviii, fasc. 3
1889, „ xix, „ 1–3.
1890, „ xx, „ 1–4.

Die grossen Monarchien oder die Weltreiche in der Geschichte von Ferdinand Gregorovius, 1890.

Rerum cognosere causas. 1890.

Gedachtnisrede. 1889.

Stuttgart:

Das Ausland Wochenschrift für Erd-und Volkerkunde Herausgeben von Karl von den Steinen:

No. 8, 1891.

GREAT BRITAIN AND IRELAND.

Dublin:

The Scientific Proceedings of the Royal Dublin Society:

Vol. vi, part 10, December 1890.
„ vii, „ 1–2, January-February 1891.

The Scientific Transactions of the Royal Dublin Society:

Vol. iv, Nos. 6–8, 1890–91.

Edinburgh:

Proceedings of the Royal Physical Society:

Session 1889–90. Vol. x, part 2.

Proceedings of the Royal Society of Edinburgh:

Vol. xvii, 1889–90.

London:

Journal of the Royal Statistical Society:
Vol. liii, part iv, December 1890.
,, liv, ,, i-ii, March-June 1891.

Proceedings of the Royal Geographical Society and Monthly Record of Geography:
Vol. xiii, Nos. 2-9, February-September 1891.

The Quarterly Journal of the Geological Society:
Vol. xlvii, Parts 2-4, Nos. 186-188, May-November 1891.

The Journal of the Anthropological Institute of Great Britain and Ireland:
Vol. xx, No. 4, May 1891.

A Catalogue of Maps, Plans, etc. of India and Burma and other Parts of Asia. London, 1891.

Transactions of the Zoological Society of London:
Vol. xiii, parts 1-3, January-October 1891.

Proceedings of the Scientific Meetings of the Zoological Society of London:
Part iv, 1890.
,, i-ii, 1891.

Proceedings of the Society of Biblical Archæology:
Vol xiii, Nos. 3-5, 7, 1891.

Proceedings of the Royal Society:
Vol. xlix, Nos. 299-301, 1891.
,, l, ,, 300 ,,

London and China Express. Files.

Proceedings of the Zoological Society of London:
Parts 1-3, January-June 1891.

ITALY.

Naples:

Bolletina de la Società Africana de Italia:
Anno x, fasc. 1-4, 1891.

Turin:

Cosmos: Vol. x, fasc. 7-8, 1889-91.

Rome:

Atti de la Reale Accademia dei Lincei:

1° Semestre Vol. vii, fasc. 3–12, 1891.

2° „ „ „ „ 1–6 „

NETHERLANDS.

S'Gravenhage:

Bijdragen tot de Taal- Land-en Volkenkunde van Netherlandsch-Indië:

Vol. vi, fasc. 2–4, 1891.

RUSSIA.

Moscow:

Bulletin de la Société Impériale des Naturalistes de Moscow:

1890, Nos. 3–4.

1891, „ 1.

St. Petersburg:

Journal of I. R. Geographical Society;

Vol. xxvi, fasc. 5, 1890.

„ xxvii, „ 1–3, 1891.

SWEDEN.

Stockholm:

Ymer Tidskrift. Published by the Svenska Sollskpet for Antropologi och Geografi:

Fasc. 6, 1889.

„ 1–4, 1890.

AFRICA.

EGYPT.

Cairo:

Bulletin de la Société Khédiviale de Géographie:

3° Série, No. 6, 1891.

AMERICA.

CANADA.

Toronto :

Transactions of the Canadian Institute :
Vol. i, Part i, No. 1, October 1890.

MEXICO.

Mexico :

Memorias de la Sociedad Cientifica " Antonio Alzate " :
Vol. iv, fasc. 5–10, 1891.
Ministerio de Fomento, 1889.
Estados Unidos Mexicanos :
Seccion 4, Nos. 67–70, 1891.

UNITED STATES.

Boston :

Transactions of the American Philological Association, 1890 :
Vol. xxi.

Cambridge :

Bulletin of the Museum of Comparative Zoology at Havard College :
Vol. xvi, No. 10, September 1891.
„ xx, „ 8, January „
„ xxi, „ 1–5, April-June 1891.

New York :

Bulletin of the American Geographical Society :
Vol. xxi, Supplement, 1889.
„ xxii, No. 2, June 1891.
„ „ Supplement, 1890.
The Journal of the Comparative Medicine and Veterinary Archives :
Vol. xii, Nos. 3–6, March-June 1891.
The Thirty-second Annual Report of the Trustees of the Cooper Union for the Advancement of Science and Art :
May 29th, 1891.

Philadelphia :

Report of the Proceedings of the Numismatic and Antiquarian Society of Philadelphia for the year 1887–89. Philadelphia, 1891.

Proceedings of the American Philosophical Society held at Philadelphia for promoting Useful Knowledge :

Vol. xxviii, No. 134.

Sacramento :

California State Mining Bureau. 10th Annual Report of the State Mineralogist for the year ending December 1st, 1890.

Washington :

U. S. Coast and Geodetic Survey :

Bulletin, No. 19, on the Sounds and Estuaries of Georgia, with reference to Oyster Culture, 1891.

Annual Report of the Board of Regents of the Smithsonian Institution. To July 1888–89.

Report of the Secretary of Agriculture. 1890.

Report of the United States National Museum for the year ending June 30, 1888.

Report of the Superintendent of the U. S. Coast and Geodetic Survey showing the progress of the work during the fiscal year ended with June 1889.

Part 1, Text.

,, 2, Sketches.

Bulletin of the United States Geological Survey :

Nos. 58–61, 64–66, 1890.

Smithsonian Miscellaneous Collections : The Toner Lectures. A Clinical Study of Skull. By Harrison Allen. May 29th, 1889.

The Correction of Sextants for Errors of Eccentricity and Graduation. By J. A. Rogers. 1890.

Index of the Literature of Thermodynamics. By Alfred Tuckerman, 1890.

Chicago :

The Thirty-third Annual Report of the Trade and Commerce of Chicago for the year ending December 31st, 1890.

San Francisco:

Transactions and Proceedings of the Geographical Society, Pacific, July 1891.

Lincoln, Nebraska:

University of Nebraska. Fourth Annual Report of the Agricultural Experiment Station of Nebraska. 1891.

AUSTRALASIA.

AUSTRALIA.

Brisbane:

Proceedings and Transactions of the Queensland Branch of the Royal Geographical Society of Australasia:
Vol. vi, parts 1-2, 1890-91.

Miscellaneous Works.

1.—The Shi-king, the old "Poetry Classic" of the Chinese. A Close Metrical Translation, with Annotations. By William Jennings, M.A. London, 1891.

2.—Pen Thsao Kang Mou. Histoire Naturelle. 9 vols. (In Chinese, bound in foreign style.)

3.—Kin Ting Sz Ku Tsuen Shu Tsung Mŭ 欽定四庫全書總目 Catalogue of Books. 22 vols. (In Chinese, bound in foreign style.) Presented.

4.—Praktische Anleitung sur Erlernung der Hoch-Chinesischen Sprache. Von P. G. von Möllendorff. Shanghai, 1891. Presented.

5.—A Manual of Therapeutics and Pharmacy in the Chinese Language, being in the main a Translation of Squire's "Companion of the British Pharmacopœia," with additions from the United States, Indian and Chinese Pharmacopœias, and from other Sources. By Rev. S. A. Hunter, with a Preface by H.E. Li Hung Chang. Shanghai, 1890. Presented.

6.—A Grammar of the Arabic Language. By E. H. Palmer. London, 1874. Presented.

7.—A Practical Method with the Burmese Language. By W. H. Sloan, M.A. Rangoon, 1876. Presented.

8.—Grammaire de la Language Annamite. Par G. Aubaret. Paris, 1864. Presented.

9.—A Comparative Grammar of the Sanskrit, Zend Greek, Latin, Lithuanian, Gothic, German, and Sclavonic Languages. By Prof. F. Bopp. Translated from the German by Edward B. Eastwick. London, 1862. Vols. 1-3, 3 vols. Presented.

10.—Wilhelm Gesenius' Hebräische Grammatik. Völlig Umgearbeitet und Herausgegeben von E. Kautzsch. Leipzig, 1885. Presented.

11.—Praktisk Lärobok. Finska Spraket of Paavo Salonius Abo, 1885. Presented.

12.—Sanskrit Grammatik. Von H. C. Kellner. Presented.

13.—Illustrirte Geschichte der Schrift. Von Karl Faulmann. Leipzig, 1880. Presented.

14.—Le Livre de Marco Polo, Citoyen de Venise, Conseiller Prive et Commissaire Impérial de Khoublaï-Khaân. Par M. G. Pauthier. Purchased.

15.—L'Empire Chinois. Illustré d'après des dessins pris sur les lieux par Thomas Allom. Avec les descriptions des Mœurs, des Coûtumes, de l'Architecture, de l'Industrie, etc. du peuple Chinois depuis les Temps les Plus Recules. Par Clément Pelle. 4 tomes. 2 vols. Purchased.

16.—A Catalogue of Blue and White Nankin Porcelain forming the Collection of Sir Henry Thompson, illustrated by the Autotype Process from drawings by James Whistler, Esq. and Sir Henry Thompson. London, 1878. Purchased.

17.—Catalogue of a Collection of Oriental Porcelain and Pottery lent for exhibition by A. W. Franks. London, 1878. Purchased.

18.—Catalogue of a Collection of Oriental Porcelain and Pottery (Chinese, Japanese and Siamese). By A. W. Franks. London, 1876. Purchased.

19.—Annales du Musée Guiment. Tome Onzième. Les Fêtes annuellement celebrées a Emoui (Amoy). Etude concernant la Réligion Populaire des Chinois. Par J. J. M. de Groot. Paris, 1886. Purchased.

20.—Die Welt in Ihren Spiegelungen unter dem Wandel des Völkergedankens. Von Adolf Bastian. Berlin, 1887. Purchased.

21.—Notiz über das Geschichtswerk Tso-tschuen. Von Dr. August Pfizmaier. Purchased.

22.—Das Nord und Östliche Theil von Europa und Asia. Von Ph. J. von Strahlenberg. Purchased.

23.—Japan: Its Architecture, Art, and Art Manufactures. By Christopher Dresser. London, 1882. Purchased.

24.—Keramic Art of Japan. By Geoge A. Audsley and James L. Bowes. London, 1881. Purchased.

25.—Descriptive and Historical Catalogue of a Collection of Japanese and Chinese Paintings in the British Museum. By William Anderson. London, 1886. Purchased.

26.—L'Art Japonais. Par Louis Gonse. 2 vols. Paris, 1883. Purchased.

27.—Encyclopédie des arts decoratifs de l'Orient. Recueil de dessins pour l'art et l'industrie. 6 séries. Avec 250 planches en chromolithogr. rehaussées d'or et d'argent. By Collinot, E. et A. de Beaumont. Paris, 1880-1883. Purchased.

LIST OF OFFICERS OF THE SOCIETY

1892-93.

President: N. J. Hannen.

Vice-Presidents: P. G. von Möllendorff.
Rev. Joseph Edkins, D.D.

Hon. Secretary: Z. Volpicelli.

Hon. Treasurer: Thomas Brown.

Hon. Librarian: J. Ritter von Haas.

Hon. Curator of Museum: D. C. Jansen.

Councillors: Otto Franke, Ph.D.
John Macgregor.
T. W. Kingsmill.
James Scott.

LIST OF MEMBERS.

(Corrected to October 31st, 1893.)

Members are particularly requested to notify the Hon. Secretary of any change of address or other necessary correction to be made in this List.

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† Indicates a Member who has contributed to the Society's Journal.
§ „ Life Member of the Society.

Name.	Address.	Year of Election

Honorary Protector.

His Majesty LEOPOLD II, King of the Belgians.

Honorary Members.

Alcock, Sir Rutherford, K.C.B., D.C.L.	Athenæum Club, Pall Mall, London, S.W.	1864
Hart, Sir Robert, Bart., LL.D. ...	Inspectorate-General of Customs, Peking	1864
Hughes, P. J., M.A.	C/o Hongkong & Shanghai Banking Corporation, London	1868
Legge, Prof. James, D.D. ...	University of Oxford	1864
Richthofen, Freiherr F. von ...	Berlin	1880
Wade, Sir Thomas F., G.C.B., M.A.	5, Salisbury Villas, Cambridge ...	1864
Zottoli, Père Angelo	Jesuit Mission, Sicawei, Shanghai...	1886

Name.	Address.	Year of Election

Corresponding Members.

†Bastian, Dr. Adolph... ...	Ethnological Museum, Berlin ...	1865
†Bretschneider, E., M.D. ...	Moïka, 64, St. Petersburg	1880
Cordier, Henri	3, Place Vintimille, Paris	1886
Edkins, Rev. Joseph, D.D. ...	Custom House, Shanghai	1864
†Fritsche, H., PH.D.	C/o Russian Legation, Peking ...	1877
†Fryer, John	Kiangnan Arsenal, Shanghai ...	1868
†Gabelentz, Prof. Georg von der	Berlin	1884
†Giles, Herbert A.	C/o British Consulate-General, S'hai.	1880
Happer, Rev. A. P., D.D. ...	Canton	1864
Hepburn, J. C., LL.D. ...	Arthur House, Pasadena, California.	1864
†John, Rev. Griffith, D.D. ...	Hankow	1864
Keischke, Ito, M.D.	Tokio, Japan	1875
Kreitner, G. Ritter von ...	Yokohama, Japan	1880
†Lindau, Rudolph, PH.D. ...	C/o Auswärtiges Amt, Berlin ...	1864
Lockhart, Wm., F.R.C.S. ...	67, Granville Park, Blackheath, London, S.E.	1864
†Martin, Rev. W. A. P., D.D. ...	C/o T'ung-wên Kuan, Peking ...	1864
†McCartee, D. B., M.D. ...	C/o Dr. Ellinwood, 23, Centre Street, New York, U.S.A.	1865
†Moule, Right Rev. Bishop, D.D.	Hangchow	1864
†Muirhead, Rev. W.	London Mission, Shanghai	1864
Rondot, Natalis	Rue Saint-Joseph, 20, Lyons ...	1864
Schereschewsky, Right Rev. Bishop, D.D.	23, Bible House, New York, U.S.A...	1864
Széchényi, Count Béla ...	Zinkendorf, Hungary...	1880

Ordinary Members.

Name.	Address.	Year of Election
Aalst, Jules A. van	Inspectorate-General of Customs, Peking	1888
Acheson, James	Custom House, Shanghai	1880
Adams, Rev. J. S.	Am. Bap. Miss. Union, Kin-hwa-fu, *viâ* Ningpo	1889
†Allen, H. J.	10, Norton, Tenby, Pembrokeshire...	1872
Andersen, N. P.	Custom House, Shanghai	1883
†Anderson, G. C.	C/o Messrs. Jardine, Matheson & Co., Hongkong	1880
Anding, W.	C/o Mr. W. Rosenthal, Unterstrasse, 85, Eisenach, Germany	1887
Andrew, W. M.	Custom House, Shanghai	1891
§Ball, J. Dyer	Supreme Court, Hongkong	1883
Baux, G.	20, Place Denfert-Rochereau, Paris...	1885
Beauvais, M. J.	French Consulate, Lungchow ...	1892
Beck, H.	23, Szechuen Road, Shanghai ...	1885
Beebe, R. C., M.D.	Nanking	1889
Bethge, C.	Casa Valentino Molo, Bellinzona, Switzerland	1887
Bock, Carl	C/o Consulate-General for Sweden and Norway, Shanghai	1888
Bottu, A.	Municipalité Française, Shanghai ...	1889
Bourne, F. S. A.	British Consulate, Amoy	1885
Bradlee, Rev. Caleb D., D.D....	57, West Brookline Street, Boston, Mass., U.S.A.	1890
Brand, W.	Messrs. Brand Bros. & Co., Shanghai	1887
§Bredon, M. Boyd, B.A. ...	C/o Custom House, Shanghai ...	1883
Bredon, Robt. E., M.A. ...	Inspectorate-General of Customs, Peking	1885
Bright, Wm.	Inspectorate-General of Customs, Shanghai	1885
Bristow, H. B....	British Consulate, Chefoo	1877
Browett, Harold	13, Yuen-ming-yuen Road, Shanghai	1891
§Brown, J. McLeavy, LL.D. ...	Custom House, Seoul, Corea ...	1865
Brown, Thos.	Messrs. Kelly and Walsh, Limited, Shanghai	1885
Brown, W. P.	Inspectorate-General of Customs, Shanghai	1890
Buchanan, J.	Messrs. J. P. Bisset & Co., Shanghai.	1887
†Bushell, S. W., M.D.	British Legation, Peking	1868
Butler, Count A. von... ...	Tamsui, Formosa	1886
Butler, P. E. O'B.	C/o British Consulate-General, S'hai.	1886

Name.	Address.	Year of Election
§Calder, J.	Port Arthur, North China	1890
Camera, L.	C/o Messrs. Lintilhac & Co., Shanghai	1891
Campbell, C. W.	British Consulate-General, Seoul, Corea	1890
†Carles, W. R.	British Consulate, Chinkiang ...	1887
Carrall, James W., F.G.S. ...	Custom House, Chefoo	1885
Chalmers, James L.	C/o Custom House, Canton	1885
§Chavannes, Prof. Edouard ...	Collège de France, 32, Quai de Béthune, Paris	1889
Cocker, T.	Custom House, Shanghai	1885
Collyer, Chas. T.	British and Foreign Bible Society, Shanghai	1891
Cordes, Aug. C.	Messrs. A. Cordes & Co., Tientsin ...	1877
Coughtrie, J. B.	45, Queen's Road, Hongkong ...	1879
Creagh, E. Fitzgerald ...	Custom House, Hankow	1886
Danforth, A. W.	Cotton Mill Co., Shanghai	1887
De Groot, Dr. J. J. M. ...	407, Marnixstraat, Amsterdam ...	1887
Deighton-Braysher, C. ...	Custom House, Kiukiang	1870
Dennys, H. L.	Secretary's Office, City Hall, Hongkong	1877
Dmitrevsky, P. A.	Russian Legation, Seoul	1882
Dodd, John	C/o Messrs. Dodd & Co., Tamsui ...	1872
Donovan, J. P.	C/o Custom House, Shanghai ...	1891
Dowdall, Chas.	21, Foochow Road, Shanghai ...	1881
§†Drew, E. B.	Custom House, Canton	1882
Dülberg, F. W. E.	Custom House, Keelung	1890
Duncan, Chesney	C/o *Hongkong Telegraph* Office, Hongkong	1889
Elwin, Rev. Arthur	Church Missionary Society, Hangchow	1890
†Faber Rev. Ernst, DR. THEOL.	18, Nanking Road, Shanghai ...	1886
Faragó, Edm.	Custom House, Foochow	1877
Francis, R.	10, Peking Road, Shanghai	1888
Franke, Otto, PH.D.	German Consulate-General, Shanghai	1890
Fraser, M. F. A.	C/o British Consulate-General, S'hai.	1888
Frater, Alex.	C/o H.M. Consulate-General, S'hai...	1877
Fulford, H. E.	C/o British Consulate-General, Shanghai	1885
Gabriel, Hermann, DR. JUR....	C/o German Consulate, Batavia ...	1884
†Gardner, C. T.	British Consulate, Hankow	1877
Gatti, Carlo	C/o Messrs. Jardine, Matheson & Co., Shanghai	1886
Gedrath, O.	20, Szechuen Road, Shanghai ...	1892
Ghisi, E.	2, Hongkong Road, Shanghai ...	1893
Goebel, Max.	Belgian Consulate-General, Shanghai	1890
Gratton, F. M., A.R.I.B.A. ...	17, The Bund, Shanghai	1889
Günzburg, Baron G. de ...	Bubbling Well Road, Shanghai ...	1893

Name.	Address.	Year of Election
†Haas, J. Ritter von	Austro-Hungarian Consulate, S'hai .	1869
§Hall, J. C., M.A.	British Consulate, Nagasaki, Japan .	1888
†Hallifax, T. E.	Matsumoto, Nagano Ken, Japan ...	1889
Hanbury, T.	C/o Messrs. Iveson & Co., Shanghai.	1868
Hannen, N. J....	H.B.M.'s Supreme Court, Shanghai...	1891
†Happer, Andrew P., Jr. ...	C/o Rev. A.P. Happer, D.D., Glenshan, Allegheny County, Penn., U.S.A.	1885
Harding, J. R.	Custom House, Amoy	1885
§Hart, J. H.	C/o Custom House, Shanghai ...	1885
Hart, Rev. V. C., M.A. ...	2, Whangpoo Road, Shanghai ...	1887
Henderson, D. M., M.I.C.E. ...	Custom House, Shanghai	1885
Henderson, E., M.D.	Szechuen Road, Shanghai	1876
†Henry, A., M.A.	Custom House, Takow	1881
Hey, E.	8, Foochow Road, Shanghai... ...	1886
Hippisley, A. E.	Custom House, Lappa	1876
†Hirth, F., PH.D.	Custom House, Chinkiang	1877
†Hobson, H. E.	Custom House, Kowloon	1868
Hodges, Rev. H. C., M.A. ...	The Deanery, Shanghai	1887
Hoetink, B.	Swatow...	1882
†Hosie, Alex., M.A.	British Consulate, Wênchow ...	1877
Hunter, Rev. S. A., M.A., M.D., LL.D.	Morgan Town, West Virginia, Va., U.S.A.	1890
†Imbault-Huart, C.	French Consulate, Canton	1880
Jack, J. B.	Custom House, Hankow	1890
†Jamieson, G.	H.B.M.'s Supreme Court, Shanghai .	1868
Jamieson, J. W.	British Consulate-General, Shanghai.	1888
†Jamieson, R. A., M.A. ...	40, Szechuen Road, Shanghai ...	1864
Jansen, D. C.	Astor House, Shanghai	1877
Jeffrey, Sydney	Hongkong	1892
Kenmure, Alexander	American Bible Society, Shanghai ...	1887
Keswick, J. J....	C/o Messrs. Jardine, Matheson & Co., Shanghai	1885
King, Paul H.	C/o Custom House, Shanghai ...	1886
†Kingsmill, Thos. W.	Szechuen Road, Shanghai	1864
Kleinwächter, F.	Lutherstr., Berlin	1868
Kliene, R.	United States Consulate, Ningpo ...	1890
†Kopsch, H.	Inspectorate General of Customs, Shai.	1877
Lemke, F.	Messrs. Meyer, Lemke & Co., S'hai .	1890
Lenz, Ph., PH.D.	German Consulate, Chefoo	1885
Lépissier, E.	Custom House, Shanghai	1885
Lieder, Ph.	Messrs. Mandl & Co., Shanghai ...	1886
†Little, Archibald J.	C/o R. W. Little, Esq., *North China Herald* Office, Shanghai	1868
Little, L. S., B.A.	1, Hongkong Road, Shanghai ...	1879
Little, Robt. W.	*North China Herald* Office, S'hai ...	1886
Lockhart, J. H. Stewart ...	Hongkong	1885

Name.	Address.	Year of Election
Low, E. G.	C/o Messrs. Fearon, Low & Co., S'hai	1892
Lyall, Leonard	C/o Custom House, Shanghai ...	1892
Macgregor, John	Messrs. Jardine, Matheson & Co., Shanghai	1888
Mackey, Jas	38, Yama, Kobe, Japan	1886
Maclellan, J. W.	13, Pilrig Street, Edinburgh... ...	1888
Major, E.	14, Hankow Road, Shanghai ...	1887
Martinoff, G.	Tientsin	1889
Marzal, Y. de Faria J. de ...	Spanish Legation, Peking	1890
McDougal, H., M.B.	Amoy	1885
McIntosh, G.	Amer. Presb. Mission Press, S'hai ...	1889
Mencarini, J.	Custom House, Foochow	1887
Merz, C., PH.D.	German Consulate, Takow, Formosa.	1883
Mesny, Gen. W.	Shanghai	1890
Milles, W. J., F.R.C.S.	8, Shantung Road, Shanghai ...	1885
Milles, Capt. D. A., R.E. ...	Bude, Cornwall	1888
†Möllendorff, O. F. von, PH.D.	C/o Mr. P. G. von Möllendorff, Inspectorate-General of Customs, Shanghai	1877
†Möllendorff, P. G. von ...	Inspectorate-General of Customs, Shanghai	1877
†Morrison, G. J., M.I.C.E. ...	Messrs. Morrison & Gratton, Shanghai.	1880
Morse, H. B.	Custom House, Tamsui	1888
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Müller-Beeck, Geo.	C/o German Consulate-General, Yokohama, Japan	1886
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†Nocentini, L.	Via del Proconsolo, 21; Firenze, Italy	1884
Novion, A.	Custom House, Wenchow	1885
Nully, R. de	Custom House, Chinkiang	1884
O'Brien-Butler, P.E.	C/o H. B. M. Consulate-General, Shanghai	1886
§Ohlmer, E.	Inspectorate-General of Customs, Peking	1885
Ottomeier, P. A. W.	Shanghai	1886
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Paterssон, J. W.	Custom House, Hankow	1883
Perkins, H. M., D.D.S.	1, Kiukiang Road, Shanghai ...	1885

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Peterson, Denton E., D.D.S. ...	9, Connaught House, Queen's Road Hongkong	1887
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Piry, Théophile	C/o Custom House, Shanghai ...	1885
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§Playfair, G. M. H.	C/o British Consulate-General, S'hai.	1885
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Rinkel, Ferd.	C/o Deutsch-Asiatische Bank, S'hai.	1890
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Rocher, Émile	French Consulate, Seoul, Corea ...	1877
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Ruhstrat, Ernst	Custom House, Chinkiang	1886
Sampson, Theo.	12, Madeira Road, Streatham, London, S.W.	1868
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Schmacker, B.	Messrs. Carlowitz & Co., Shanghai ...	1887
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Scott, James	British Consulate-General, Shanghai	1893
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Spinney, W. F.	C/o Custom House, Shanghai ...	1885
Startseff, A. D.	Messrs. Tokmakoff, Molotkoff & Co., Tientsin	1889
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†Taylor, C. H. B.	Custom House, Tientsin	1885
Taylor, F. E.	Custom House, Kowloon	1885

Name.	Address.	Year of Election
Taylor, Geo.	Custom House, Shanghai	1891
Timm, J.	Great Northern Telegraph Co., S'hai	1891
Ting I-hsien	Inspectorate-General of Customs, Shanghai	1890
Underwood, G. R., M.B. ...	Kiukiang	1888
Valdez, J. M. T.	Portuguese Consulate-General S'hai.	1888
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†Volpicelli, Z. H.	Custom House, Shanghai	1886
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Washbrook, W. A.	Custom House, Chinkiang	1881
Watters, T., M.A.	British Consulate, Canton	1865
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†Williams, Rev. E. T.	192, E. Long St., Columbus, Ohio, U.S.A.	1889
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Zooyef, Dr.	C/o Russian Consulate, Shanghai ...	1890

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(Compiled by JOSEPH HAAS, *Hon. Librarian).*

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