# THE MOUNTAINS OF TURKESTAN.*

By ELLSWORTH HUNTINGTON.

## The Ontographic Relations of Human Life.

A complete study of geography must consider not only the external habits of plants, animals, and men in relation to their environment, but also human character and methods of thought in so far as they are, directly or indirectly, the product of physiographic conditions. As yet the science of geography is so young that we have grasped but a few of the most elementary of the relations that connect the complex nature of man with his physical environment, and with its indirect effects working through lower forms of life. Indeed, so imperfect is the science that we scarcely know how even to classify the facts belonging to its ontographic half. In the remainder of this paper I shall describe some of the habits and characteristics of the Khirghiz inhabitants of the mountains of Turkestan, and shall attempt to refer them to their physiographic causes. With a certain class of facts, such, for instance, as those relating to diet, this is comparatively easy; with others it is quite impossible. It may be that the high cheek-bones, slit eyes, straight black hair, sparse beards, and small despondent mustaches of the Khirghiz are indirectly due to remote physiographic causes. At present, however, we cannot connect any cause with this effect. Accordingly, the Tartar physiognomy of the Khirghiz must be tentatively pigeon-holed as a fact that may be geographic, but cannot yet be properly classified, and may even, though this is not probable, belong wholly to some other science. In the following pages I shall for the most part omit these doubtful facts that have not yet found a geographic setting, and also, for lack of space, certain others whose physiographic relations are clear. I shall begin with the most important feature of Khirghiz life, the fact that the people are pastoral nomads, and from that shall pass to certain related facts which more or less depend on this main feature.

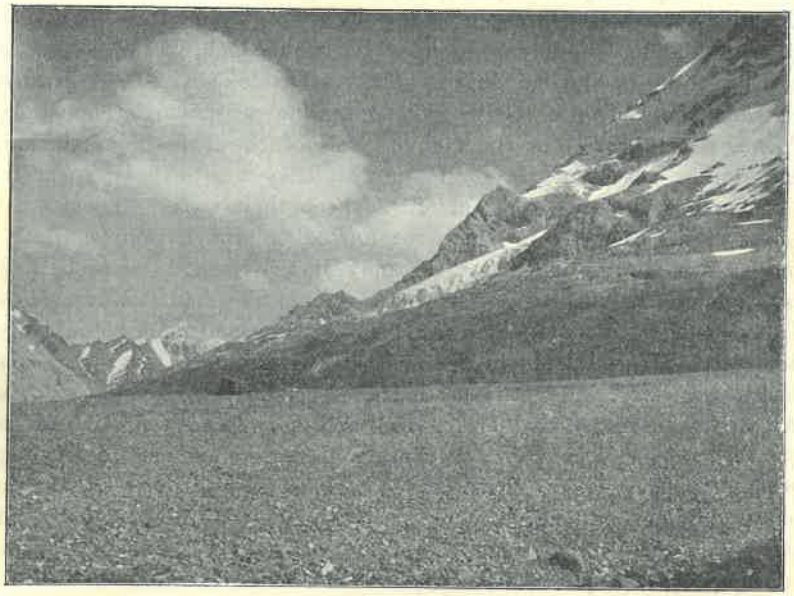
*The Physiographic Conditions of Permanent Nomadism.*—The circumstances which favour nomadic life are too well known to need much comment. All races, in their ascent from savagery, may have passed through a nomadic stage, but it is only where the conditions of life are peculiarly favourable that the habit of migrating with their flocks and herds becomes permanently fixed upon a people. The essential conditions are, either that two markedly different climatic zones shall lie so close to one another that it is possible to migrate annually from one to the other, or that in a single region the amount of water or pasture shall be so small that any individual place will support flocks but a few weeks or months at a time. This latter case is that of truly desert countries, such as Arabia, and does not here concern

* Continued from vol. **25**, p. 40.

us. In the other case there are two alternatives. In the first alternative, one of the regions is a desert or a mountainous tract where pasture is found during only a certain limited season. The other region is what we call a normal country where permanent agriculture is possible. In such a case nomadism steadily loses ground, because the people more and more devote themselves wholly to agriculture. In the other alternative, one of the regions consists of high mountains that are covered with snow in winter, but furnish fine pasturage in summer, while the second region is one where agriculture is possible, but which is not capable of supporting a growing population, because the climate is either too dry or too cold. Southern Utah, in the basin region of the western United States, furnishes a good example of a country where the lower regions along the edges of the basins are permanently inhabited by an agricultural people in spite of the scarcity of water, while the neighbouring "high plateaus," from 9000 to 10,000 feet above the sea, furnish such good pasture that the inhabitants of the lowlands migrate thither in summer, and have even built rude houses on the uplands. Switzerland, with its chalets, on the other hand, presents an example of nomadism in a country where the lower region is too cool for the highest development of agriculture. In such countries as Utah and Switzerland, the nomadism forced upon the people by physiographic conditions is not necessarily incompatible with a high degree of civilization.

*The Nomadism of the Tian Shan.*—The nomadism of the Tian Shan is of the same type as that of Switzerland, in spite of the fact that the degree of civilization in the two places is so different. In almost no part of the world is the nomadic life more likely to be permanent than in the region that we are discussing. All the plateau portion of the Tian Shan and much of the Alai region are too cold to allow of cultivation, yet the extent of the uplands and the richness of the summer vegetation enable them to support millions of sheep and cattle. As fall comes on, however, the grass is covered with snow, and the people must take their animals farther and farther down the mountain-side, moving their dwellings as the necessities of the flock require. At last the lowest valley is reached, and the nomad must either stay there through the winter, or risk a journey through the snow over a ridge to another valley. It may happen that his valley is so low and dry as to have no snow during the winter, or that he is on the edge of the mountains, and comes down to the open plains. In that case his manner of life will be the same throughout the year. If, however, the nomad stays in a fairly cool valley, where snow lies for a month or two, he must make some provision for the winter feeding of his animals. In such valleys there is usually a good growth of tall grass during the summer, and this he learns to cut and store in great heaps for use in cold weather. As soon as the process of hay-making becomes habitual, it leads to the repeated use of a single camping site, and

later to the building of permanent houses. The poorer people whose small flocks afford them but a scanty sustenance learn to eke this out by planting hardy grains, and the stage of semi-nomadism begins. The richer people scorn agriculture, and are still pure nomads; the poorer members of the community are perforce half nomadic, half agricultural. In this early stage of semi-nomadism the Khirghiz of the Tian Shan and Alai are to-day. In time they will doubtless come to the true semi-nomadic stage, when, like the mountain Kurds of Turkey, every family has a permanent village habitation, although they spend the summers in tents among the highlands. Further than this they will



THE VALLEY OF KHOJA ISHKEN, AMONG THE ALAI MOUNTAINS. ON THE RIGHT IS A TINY GLACIER.

probably never go, no matter how civilized they become, for, as has already been said, their country is pre-eminently the land of semi-nomadism, and almost forbids any other form of life.

## The Khirghiz Nomads.

*Domestic Animals.*—The preceding generalities prepare the way for a consideration of a few Khirghiz habits and customs which are direct adaptations to a nomadic and pastoral life, and hence may be regarded as ontographic responses to physiographic conditions. The first subject to be considered in this connection is domestic animals, for these are the foundation of all industries and occupations. So pre-eminently is this the case that the word "property" (*mal*) almost always

means live-stock of some sort. The number of kinds of animals is quite limited. Sheep, of a fat-tailed variety, are by far the most common animal, and their milk, flesh, wool, and skin form the indispensable necessities of life. Less numerous and less useful are the oxen and cows, which furnish milk and hides, but are not often eaten. Frequently they are used as baggage animals, and it is no uncommon sight to see a shepherd moving slowly along after his sheep on ox-back. With the oxen must be put the yaks, or "Chinese cattle," as the Khirghiz call them, that are found in small numbers among the nomads whose winter quarters are especially elevated. The milk of yaks, and especially the cream, are delicious. Some of the best of the Khirghiz animals are a cross between yaks and ordinary cattle. Another important animal is the two-humped Bactrian camel, which is kept in part for its milk and hair, but is chiefly valuable as a beast of burden and an article of sale to the people in the neighbouring lowlands. Camels cannot thrive at the higher levels of the Tian Shan plateau, and even at heights of 8000 or 10,000 feet they must, even in summer, be covered with funny coats of felt to keep them warm. The animal *par excellence*, the one to which the unmodified appellation "animal" (*haiwan*) is always understood to apply, is the horse. In such high estimation is he held, that never once during three months' travel do I remember to have seen one used as a pack-animal among the truly nomadic Khirghiz. Most of the horses are small stocky animals, tough and wiry, and with easy gaits, especially the numerous pacers. All are well broken and bridle-wise, and have been well treated, so that few are vicious. The only other important animal is the dog, whose function is to guard the encampment even more than the sheep. Domestic fowls are never met with among true nomads, though one sometimes sees an eagle or a falcon kept for hunting. Some of the poorest people own a few goats and donkeys, but these animals are despised. In spite of the preponderant part played by live-stock in the life of the Khirghiz, the varieties of animals with which he is much concerned are limited to the horse, cow, camel, yak, sheep, and dog.

*Dwellings.*—Inasmuch as the best pasture for the flocks of the Khirghiz is found close below the continually shifting snow-line, the shepherds and their families must often move their dwellings. Other reasons also render this course advisable. It takes but a few weeks to eat up the finest grass close to the tents, and then either the camp must be moved or the flocks driven further. Again, as the animals are brought close to the encampment at night the ground soon becomes very foul, especially during rainy weather, when there is no chance for it to dry. Accordingly, the kibitkas, as the round felt tents are called, are so built as to be not only thick enough to keep out the heavy rain and snow, but also to be easily taken to pieces and portable. Their appearance and mode of construction are more evident

from the accompanying photographs than from any amount of description. No iron is used in them; the latticework, made of strips of wood 1 inch in diameter, is bound together by bits of raw hide stuck through holes, while the poles which support the roof are tied in place with home-made ropes of wool. Large felts cover the outside, the lower part of which is sometimes still further adorned and protected by matting made of reeds a quarter of an inch thick and 4 feet long, tied so as to stand vertically. The whole dwelling is so made as to fold up compactly into pieces which can be carried by camels or oxen.

*Migrations.*—Few sights retain their novelty longer than the breaking

DOWN THE VALLEY OF THE TENGIS BAI, IN THE ALAI MOUNTAINS SOUTH OF MARGELAN. IN THE CENTRE OF THE PICTURE IS A SART VILLAGE, LYING ON A TERRACE OF GRAVEL. IN THE BACKGROUND ON EITHER SIDE OF THE STREAM THE LEVEL MOUNTAIN-TOPS SHOW THE OLD PENEPLAIN IN WHICH THE MODERN VALLEYS ARE INCISED.

and the making of a Khirghiz camp and the intervening migration, the ontographic centre around which swings the whole life of these mountain nomads. First, in the early morning, there is the bustle and stir of preparation, the taking down of kibitkas, the gathering of flocks and herds, the catching of neighing horses, the loading of oxen and camels, and the confusion of happy children trying to help in the bustle of this gala day. Then there is the winding procession of animals scattered at intervals along the many-trailed path among the smoothly sloping mountains or in the level basins. Last comes the halt, and the setting up of the graceful frames of the kibitkas on a strip of the

smoothest, greenest sod. At the head of the procession, when first I saw a village arriving at its camping-ground, came a drove of sleek horses, fat mares and frisky colts, running, kicking, neighing, squealing. Then, when the horses had been driven to one side, the loaded camels came gravely on, silent while they were moving, but with fearful roaring and grunting when they were made to kneel to have their loads of felts, rugs, poles, and iron pots removed. With them came the women and children on horseback, the rich wife dressed in green silk, and sitting astride of a silk saddle-cloth of red and yellow, the poor wife in brown cotton. Next, after a considerable interval, came the clumsy pack-oxen, not very noisy except when a dog-fight broke out as they came up, and not very interesting except when an ox ran away with a small boy on top of his load, which adventure caused another small boy of three to run excitedly about in a shirt and a pair of big boots so tall that he could not bend his legs. Quieter still were the cows, and the calves which the boys caught by the tails and tied up by the heads. And quietest of all were the thousand or two of sheep which, after the kibitkas were almost up, came far behind with gentle bleating and the rainy patter of many little feet.

*Furniture.*—Where migrations are so frequent, the furniture, like the houses, must be easy to pack and move. It consists in part of felts and bright rugs made in the kibitkas from the wool of the household flocks. Another item is the thick quilts made of cotton or silk, stuffed with wool, and admirably adapted to a region where the nights are always cool. Under or beside the pile of these which occupies the side of the kibitka during the daytime are several gay boxes covered with fancy leatherwork and filled with the family treasures. The women take care of the boxes, and carry the keys suspended at their heels by a fancy cord tied to their black braids. On the right side of the kibitka, as one enters, a tall screen of reed matting wound with worsted in bright artistic patterns shelters the cooking-utensils and food, and shuts off a small part of the kibitka for the special work of the women. The only other furniture, unless the pile of saddles be counted, is of an ornamental nature. In rich houses great hangings of silk, fur, and embroidered velvet, the artistic work of the Sarts of the lowlands, are often suspended from the walls.

*Utensils.*—Among nomads, the utensils, also like the houses and furniture, must be such as can be easily carried on pack-animals without fear of breaking. The commonest receptacle for liquids is a whole sheepskin, scraped and turned inside out. Buckets and flasks are also made of leather. The latter are sometimes 2 feet in diameter, and are of relatively artistic design. A few china bowls of Russian manufacture are used, but most bowls, as well as spoons, are made of wood. Metal is employed for very few utensils, although the most important article for kitchen use is the enormous bowl-shaped caldron of iron in which

the greater part of the food is cooked. Most of the cooking is done over smoky fires of dried dung, the only available fuel in a country where cattle are abundant and trees rare.

*Dress.*—In dress the Khirghiz find less opportunity for the expression of artistic sense than do their neighbours in warmer regions. Because of the coolness and dampness of the climatic conditions under which the mountain Khirghiz live, the chief garment of both sexes is a long quilted gown of dark-coloured cotton stuff, to which the frequent rains add a deeper hue and greasy shine. Beneath this is usually another long garment of thinner stuff, coloured cotton or, in the case

ART SHEPHERDS ON THE BORDERS OF BUKHARA AT THE WESTERN END OF THE ALAI BASIN. THESE MEN BUY SHEEP AND GOATS FROM THE KHIRGHIZ, AND DRIVE THEM TO THE CITIES OF FERGHANA.

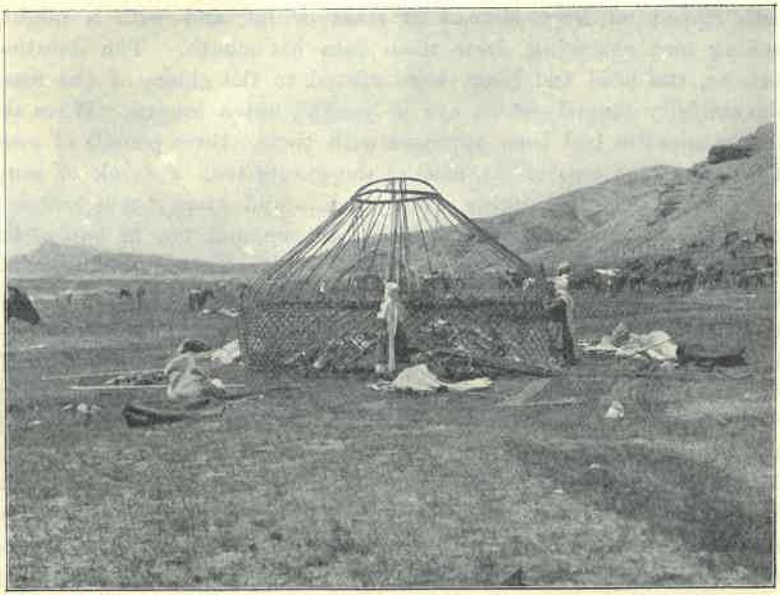
of the richer women, silk, while the under-clothes are made of white cotton. As a rule, both men and women wear big top-boots of raw hide, admirably adapted to resist mud and dirt. The head-dress affords the chief chance for display of artistic taste. The men wear heavy caps of felt, with turned-up brims of the same material or of lamb's wool, and the young girls wear something similar. The married women, however, glory in enormous, strangely twisted head-dresses of cotton, either pure white or delicately embroidered with pale colours. The twisting of these head-gears is an elaborate affair, and varies considerably from place to place, as the accompanying photographs show. Under the snowy head-dress are various ornaments of silver and

embroidery which hang from the hair and fall over the ears and down to the breast.

*Art.*—Native Khirghiz art, as displayed in the dwellings, furniture, utensils, and dress of the people, is of a distinct type, though primitive. It expresses itself in the rugs, felts, matting, boxes, utensils, and dress already mentioned, and in fringed bands of cotton cloth that surround the kibitkas just below the roof. These are ornamented with designs made crudely by sewing bits of cloth of one colour upon larger pieces of another colour. Pieces of felt with designs of this sort are often used instead of rugs for doors, especially in China, while in the Alai basin the outside of the kibitkas is adorned with little pieces of coloured cloth sewed on to the felt at the base of the roof. The native artistic sense of the Khirghiz finds small opportunity for expression except in articles made of the two great products of the flocks—wool and leather.

*Food and Habits of Eating.*—As might be expected from their surroundings, the food of the Khirghiz is very limited in variety, and eaten in the rudest way. A typical meal, such as many at which I was a spectator, is likely to prove unpleasant to civilized nerves. One day, for example, I was on the floor in company with a ring of Khirghiz, who sat on the felts which covered all but the middle of the floor of a rich kibitka, when in came a man holding up the skirt of his gown full of dried dung. With this he kindled a pungently smoky fire on the stones which occupied the middle of the kibitka floor, and on the flameless conflagration put some tea to boil. When this was ready, the host took from the latticework of the kibitka a cloth heavy with grease and dirt, and spread it before me. After much discussion, a boy was benevolently sent to fetch me some milk or cream. While he was gone, a metal tray, containing small pieces of bread and sugar, was brought in and laid on the dirty cloth. The bread consisted of cubes, half an inch in diameter, cooked like doughnuts in hot fat at the bottom of an enormous iron bowl. Among the strictest nomads bread is a great rarity, and I have even had the pleasure of giving a piece to children who never tasted it before. After the tray was in place, some china bowls were taken from their nest in a round wooden box, and, having been wiped with another greasy cloth, were filled with tea. By the time this had become cool the boy returned with news that his quest had been successful. At his heels followed a fat Khirghiz housewife, who dived behind the ornamented screen of reeds on the right, and with a wooden ladle scooped almost solid cream from a large wooden bowl into a small china one, and then poured milk from a leather flask into another smaller wooden bowl. As she handed the milk and cream to one of the men, she saw that bread was needed on the tray. Kneeling before a red and green leather-covered box, she reached behind her heels for her silver-loaded bunch of keys, suspended from her long braid

of straight black hair, and, finding the proper key, took from its safe repository a handful of carefully treasured bread. Now the tea-drinking began, and it continued till the supply was exhausted. Each guest had had three or four bowls, but even that was not enough, so each one finished with a wooden bowl of "kumess," the fermented milk that still remains one of the most important articles of Khirghiz diet. Then when the servants had smacked their lips over the remains of the meal, each man, with a look to see that his neighbours were ready, raised his hands to his face, and all in unison stroked their beards, with a muttered benediction to Allah.



THE ERECTION OF A KHIRGHIZ KIBITKA AT A NEW ENCAMPMENT IN THE ALAI MOUNTAINS. THE WORK OF SETTING UP THE KIBITKAS IS ALWAYS DONE BY THE WOMEN.

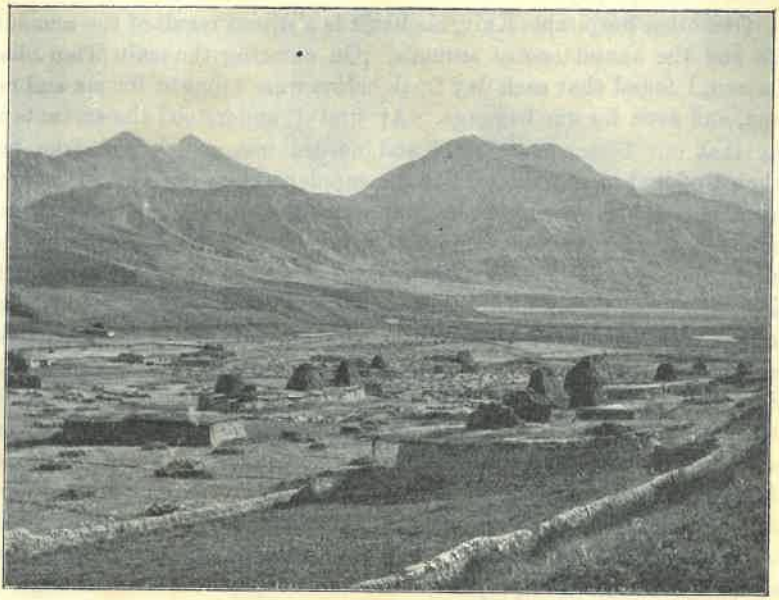
During the next hour or two big stories of brave deeds and travel were told, or less praiseworthy talk of quarrels and women kept the party animated at first, but soon the kumess took effect, and drowsiness began to prevail. At length, to the relief of all, the host appeared, and we knew that the real meal was at hand, for the tea-drinking is, after all, but a new-fangled Russian notion. In his hand, at the end of a spit, he bore a small piece of roasted fat from the immense kidney-shaped tail of the sheep that we were to eat. Pulling his big knife from his girdle, he cut off a morsel and placed it in the mouth of each guest as an appetizer. Behind the host came his boy, bearing a basin and a copper urn of water, and in the oriental way poured water over the hands of one after another of the squatting circle, beginning, of course, with the

most honourable. As the Khirghiz put out their hands to wash, they made a peculiar gesture of throwing back the sleeves, which are made so long as to completely cover the hands and protect them from cold and wet.

Now all was ready for dinner, and in it came, an enormous quantity of boiled mutton in an enormous wooden bowl, flanked by two smaller wooden bowls full of the broth in which the meat was cooked. The host said, "Eat;" some one else said, "Eat;" and then each cross-legged Khirghiz cried, "Eat," and, whipping his knife from his girdle, seized a bone. The scene that followed was like the feeding of wild animals in a menagerie. Each man grasped a bone, and with his knife and teeth ripped off huge chunks of meat or fat, and with a mighty sucking and smacking drew them into his mouth. The daintiest portions, the head and liver, were offered to the elders of the feast, who skilfully gouged out an eye or yanked out a tongue. When the edge of appetite had been appeased with two or three pounds of meat and a pound or two of fat, most of the guests took a drink of soup, and then, with idly hanging greasy hands and greedy eyes, watched while the epicure cracked and sucked a bone, and one or two of the more skilful carvers prepared a delicate hash. The fat tail, which is really delicious, a selected portion of the liver, and a good supply of other fat and meat were most cleverly sliced into fine fragments and mixed with soup in the bottom of one of the bowls. When the mixture was ready, each man rolled up a handful and sucked it noisily into his widely distended mouth, or, as a mark of respect and affection, put it into the mouth of his neighbour. The meal was over in an incredibly short time—the last bones were cracked and thrown to the edge of the kibitka; bowls of soup, followed by those of kumess, were again passed around; the big top-boots were oiled by rubbing the greasy hands upon them; the beards were stroked; and the main business of life was over. Day after day the diet is the same, except that the amount of meat is less and of kumess more. For variety the mutton is occasionally fried or boiled in its own fat or roasted on a spit. Sometimes, too, a young colt is killed, and is eaten as the greatest of delicacies. The meat, the one time that I ate it, tasted like a cross between the best grades of veal and lamb, and was fit for the table of the most exacting epicure.

*Hospitality.*—Just as the Khirghiz habits of eating are the result of an environment which compels the people to live on animal food, so the character of their hospitality is the result of that same environment which isolates them, and at the same time compels them to travel. That the Khirghiz are hospitable need hardly be said. Pastoral people are always so. They live in a region where travellers are so few, and habitations so migratory, that special accommodations for wayfarers are out of the question. Yet the nomad himself, in his search for stray

cattle, in his business of exchanging animals, or in his rides between the summer camp and the winter supply of grass, must often spend the night far from home. Everywhere the people are in the habit of receiving guests, and the custom is to pay nothing for entertainment. Because of this the Khirghiz meets the traveller with less suspicion than does the less cosmopolitan villager who lives near a big city. When a stranger arrives, the customary greeting is to take off the cap, shake hands by clasping your host's right hand between both of yours, and lastly to stroke the beard. Often when a stranger passes by, men turn and accompany him on horseback for an hour or two,



A VILLAGE OF THE SEMI-NOMADIC KHIRGHIZ OF THE ALAI BASIN. THE FIELDS, IN WHICH LIE PILES OF GRAIN, ARE PARTIALLY SEPARATED BY WALLS OF MUD AND STONE. ON THE FLAT ROOFS OF THE MUD HOUSES STAND ENORMOUS STACKS OF HAY FOR WINTER USE. IN THE BACKGROUND ARE RIVER TERRACES OF GRAVEL.

to do him honour, and to get the news. The isolated life of the Khirghiz accounts for their eagerness in this latter respect, and the abundant leisure of the nomadic life accounts for the unconcern with which a man puts off his work for half a day. These chance encounters on the road are often most interesting. One day, as I was crossing the Jukuchak glacier south of Issik Kul, five men appeared on the ice above me, one mounted on an ox, one on a cow, and three on horses, with a loaded camel bringing up the rear. All these five strangers dismounted from their slipping animals and, walking across the treacherous ice, gravely shook hands with me. They certainly are a polite and friendly people. Whenever a guest mounts his horse,

the chief man present runs to assist him by seizing him under the shoulder and shoving him up. If the guest happens to be a foreigner who is so peculiar as to wish to have a whole kibitka to himself, a family will often move out, or rather they will let their kibitka be moved away from them. It is a strange sight to see a kibitka picked up bodily by a dozen men and women, who seize the lattice on the inside and, themselves invisible save for the many legs, carry the beetle-shaped tent across the greensward to a new clean spot. The household goods are left in a sorry heap, and the family has to find another house, but even for such service the more aristocratic people refuse to accept pay.

One other hospitable Khirghiz habit is a direct result of the nomadic life and the abundance of animals. On entering the main Tian Shan plateau, I found that each day fresh horses were brought for me and my men, and even for our baggage. At first I understood the servants to say that our horses were tired and needed rest, which was true, but when I offered to pay the hire of the supplementary horses I discovered my mistake. In these regions, it appears, the traveller is theoretically supposed to start from home and to return thither by the way that he went. The first day he rides his own horse, and at night turns it out to feed with those of his host. In the morning he does not take his own animal, but a fresh one from among those of his host. This he again leaves at night, and so on day after day. On the return journey he picks up at each place the horse that he left there and returns it to its owner. In practice the scheme is not so simple. In our case we were furnished daily with from six to ten horses belonging to various people at the camp where we had spent the night. At the end of the day's march, or occasionally in the middle of the day, we gave up the animals to one or two men who had come with us for the purpose of driving them back. For all this the people would take no pay whatever, though it was often offered. So freely does one man make use of another's horses that not infrequently when we passed a new herd, some one would say, "My horse is bad," and would dash off to catch another with a rope looped like a fishing-line to the end of a stick. I do not know how universal the custom is, but during our journey the changing of horses played so important a part that the stock remark was not about the weather, but "How is your 'animal' to-day? Has he a good gait?"

*Khirghiz Sports.*—The sports as well as labours of the Khirghiz result from the same physiographic conditions which induce nomadism. Horses and horseback riding are the one idea of these people, and their greatest sport is the "bagai." In the Alai valley, close to the border of Bokhara, I saw this interesting game. As we came down the hillside to the smooth plain, a crowd of distant horsemen seemed to be standing motionless, until one or two darted out, and the whole fifty or sixty dashed after them. Evidently they were chasing a leader in some game,

and the leader kept changing. Drawing nearer, we saw that two galloping horsemen had detached themselves from the crowd, and as they rode toward us were struggling for a large black object bigger than a sheep. Suddenly one of them threw his leg over this, gave it a jerk which nearly dismounted his rival, wheeled his horse to the left, and, dashing up to me, threw the thing at my horse's feet. It was a black calf, headless and footless, and partly skinned. At once three or four men who galloped up behind the leader, leaned from their moving horses and attempted to pick it up. Two grasped it, twenty or thirty others surrounded them, and all struggled to seize the calf and carry it

THE BAGAI, OR NATIONAL GAME OF THE KHIRGHIZ. IN THE CENTRE SIT TWO MEN, EACH OF WHOM HAS A LEG THROWN OVER THE ANIMAL FOR WHICH THE PLAYERS ARE STRUGGLING. IN THE BACKGROUND LIES THE TERRACED ALAI BASIN, BOUNDED BY THE LOWER SLOPES OF THE PAMIRS.

off. In the *mêlée*, the horses jumped and turned this way and that, while all the riders tried to force a way to the middle of the fight, whipping their own and other people's horses, grabbing horses by the head and turning them suddenly round, and themselves leaning far out of their saddles as they grabbed madly at the poor black calf. At last one man captured it, threw it over the front of his saddle, put both legs over it and was off at a dead run with fifty others after him. They could not catch him, and, making a great sweep as large as the terrace allowed, he returned in triumph to throw the beast before me and get the customary reward.

Then began another scrimmage, in which one over-zealous rider was

knocked from his horse and apparently trampled on, but when the kicking, surging crowd of horses had passed, his horse was still with him, and he mounted and galloped off with a grin. After half a dozen scrimmages, one daring rider seized the prize and went over the terrace down a hundred-foot slope so steep that a footman could scarcely climb it without zigzagging. At the foot the bold rider, hard pressed by his pursuers, cantered across a broad arm of the river, and away across the plain beyond, trying as he went to skin the calf, for he who carries off the skin wins the "bagai."

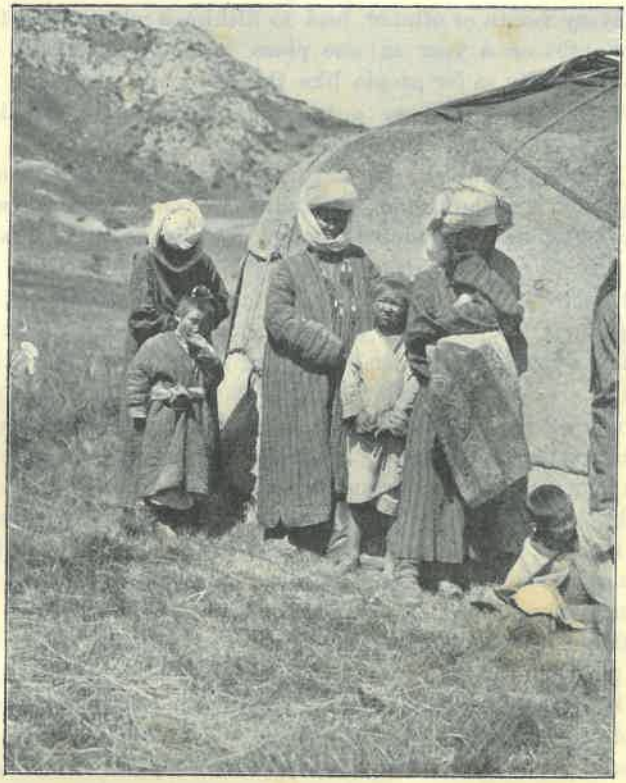
We rode away with the "Deyem Bai," the giver of the entertainment, who was homeward bound to inspect the cooking of the sheep for the feast that was to follow. It is the custom, I was told, for men of wealth to furnish a goat or calf for the "bagai," and to invite all the men of one or two villages to join in the sport, and at the end to indulge in a feast, or better, a carnivorous orgie. Among the occasions for a "bagai" are a marriage, the birth of a son, the erection of a new kibitka, and a death. Possibly this struggle for a dead animal is a relic of the time when the ancestors of the Khirghiz really fought to get the prey from one another. Whatever its origin, it is a wonderful training in horsemanship. For some reason, no woman is allowed to see the "bagai," or, naturally, to join in the subsequent feast.

*The Nearness of the Khirghiz to Nature.*—The completeness with which Khirghiz life and character are determined by natural surroundings, makes the relation between physiography and ontography far more evident than in the case of more highly civilized people. If the nomad is to be successful, the keenest of eyesight is necessary to detect cattle or encampments at a distance. It was with amazement that I heard my guide say, "Do you see those cattle off there at the foot of the mountain? They are Chinese animals—yaks." After a long search I found them, mere tiny specks of black, so far away that even with a strong field-glass I could but barely distinguish them from ordinary cattle. That my guide should recognize them as yaks shows a keenness of sight equal to that of the most skilful hunting tribes of savages. Other Khirghiz showed equal quickness in detecting smoke, kibitkas, men, and animals at a distance, so that the trait seems general.

His mode of life makes the Khirghiz able to endure hunger, thirst, and fatigue, for these are the necessary accompaniments of long rides in search of strayed cattle. He has no fear of raging fords or slippery passes, and despises the city Sart who shrinks from crossing a ford where his horse may lose his footing and be washed downstream. In such rough experiences the Khirghiz learns to be self-reliant, and his frequent meeting of strangers under all sorts of circumstances gives him an air of readiness and self-possession. The talk of the Khirghiz is full of roads and travels. If you ask a man how far it is to a certain place, he at once begins to tell you all the intermediate stages and their

difficulties. These people are full of the knowledge of their plateau that comes from experience, but book knowledge is very rare. As my escort, a proud influential Khirghiz, said one day, "Why should the Khirghiz learn to read? It is enough for us to know about sheep and horses and cattle. What more do we want?"

*The Khirghiz and Civilization.*—If there were no outside world with which to come in contact, such a view of life might perhaps be wise.



KHIRGHIZ WOMEN IN HOLIDAY ATTIRE STANDING BESIDE A KIBITKA, WHERE THEY ARE ABOUT TO MAKE A VISIT. ALAI MOUNTAINS.

As it is, the Khirghiz cannot stand against the hard realities of civilization. The coming of the Russians has done them an immense amount of good in making the country peaceful and safe, and in providing good markets for the products of the flocks. It has also added to their happiness by making such luxuries as tea, sugar, bread, and cheap cotton cloth accessible to all, but it will harm them if it leads them to abandon the pastoral life for that of the day labourer. The delightfully gentle and gracious courtesy of the Khirghiz cannot offset their laziness, if that term can properly be applied to a quality which

is a necessary outcome of the nomadic life. A nomad is justified in being often idle, for his great exertions at certain times compell him to rest at others, but the qualities so engendered are of no use when steady work is required day after day. Thus it comes to pass that those Khirghiz who have come into close contact with the Russians seem to be deteriorating. Laziness leads to dishonesty, and both tend to insolence and vulgarity. A change of habits, too, leads to greater uncleanliness, for customs that may be harmless where a camp is shifted every month or oftener, lead to filthiness where a kibitka stays for six months or a year in one place. Change is always difficult, and it is especially so for people like the Khirghiz, who have adapted themselves so completely to a type of physiographic conditions so unusual as those of the Tian Shan plateau.

*The Position of Women.*—Up to this point in our consideration of the ontography of the Turkestan mountains, the connection between life and physiographic environment, though not always direct, has at least been so close as to be clearly evident. We have seen that not only the outward habits of life, but also certain mental and moral qualities are due largely, if not entirely, to physical environment. In the short remainder of this article, I shall take up one or two among the many subjects where such a relation does not at first sight appear, although I am firmly convinced that it exists. In determining the mental and moral character of a people, no factor is more important than the position of women, and the resulting character of the homes in which the children grow up. If the position, and hence the character, of women is materially affected by physiographic environment, it follows that a host of other characteristics must be indirectly affected through the tremendous agency of the home, and of early training. I freely admit that religion, heredity, tradition, and perhaps other unknown factors play an immense part in determining the character of a race, but is it not possible that these, too, in their origin are largely the result of physical environment? With that, however, we are not now concerned. It will be enough, at present, to point out certain ways in which the physiography of the Tian Shan, working through the institutions of nomadic pastoralism, affects the position of women. If our conclusions are correct, all character is influenced, more or less, by physical environment, and hence is one of the integral subjects that go to make up geography.

Mahommedanism, as every one knows, inculcates the seclusion of women, and makes of her nothing but a stupid drudge to do man's work, or a light plaything for his pleasure. Wherever people of Muslim faith gather in towns and cities, as I have seen in Turkey, Persia, Asiatic Russia, and Chinese Turkestan, this ideal prevails. In the crowded villages and cities women can do their work behind high mud walls, and can be confined to certain unseen rooms when male

guests visit the house. The support of the family does not depend upon them, and their activities are almost wholly dependent on the will of their husbands. It is but rarely necessary that they should leave the house, and when they do, there is usually no work to be done and it is easy to keep their faces covered. Only the very poor, who must work out-of-doors, or those who are confessedly immoral, go about with unveiled faces. The evil effect of all this has been often described, and needs no comment.

Among nomads the case is different, and this is true, not only in one Mohammedan country, but, so far as I know, in all without respect to the race of the inhabitants. The women go about unveiled, and have a strong influence in the affairs of the community. Their relative strength of character is evident from the notable fact that when a Turkoman woman is married to a Persian, or a Kurdish woman to a Turk, the wife from the nomad stock, so it is said, usually rules the harem, and often rules the whole house. The universality of the contrast between the position of women in nomadic and non-nomadic Mohammedan populations goes to show that the contrast is not the product of racial differences, but of nomadism; and nomadism, as we have seen, is due to physiographic environment.

Let us see in brief how the nomadic life of the shepherds of Tian Shan affects the Khirghiz women. In the first place, the women cannot be kept in seclusion. The house of a nomad must of necessity be small, and cannot contain two rooms, except under the most exceptional circumstances. When a visitor comes to the tent, he must enter the room where the women are at work, or else the women must work outside, as indeed they must under any circumstances; and there, of course, they cannot be prevented from being seen by men other than those of their families. Then, again, at the time of migrations there are no shelters left standing, and the women cannot possibly be kept concealed. In the second place, the women cannot be made to veil their faces. No one can work with a cloth hanging down over her face. The village woman bakes and brews and washes, and milks her few sheep and goats in the seclusion of her own courtyard, where she can throw off her veil in the assurance that no strange man will see her. The nomad woman, as we have seen, must work in semi-publicity, and cannot be bothered with a troublesome veil, especially when both hands are more than occupied in milking some of her many sheep. Accordingly, while the Khirghiz woman is very particular about her head-dress, she makes no attempt to conceal her face. She is quite in the habit of meeting strangers, whether men or women, and she does it modestly, though without timidity. Indeed, she makes a most admirable hostess. Her freedom from seclusion does much, both morally and mentally, to elevate her above her less fortunate sisters of the villages.

Another side of nomadic life tends to strengthen the character of the women. They are obliged to rely more or less upon themselves, and to take the initiative at times. In their care of the flocks and herds, it often happens that the men are all far away throughout the whole day, and at certain times, when the grass must be cut in the valleys, many of them are away for several days. At such times the women are responsible for everything. I have come to an encampment of seven or eight tents where no one was left, except a few girls and one or two old women. The smaller girls, not unnaturally, were afraid of us; but the newly wedded wife of the chief man, a pretty girl of sixteen, entertained us most graciously, and by the time that her husband and the other men arrived had supper ready for them and us. A veiled village woman would merely have screamed and run away at our approach. Beside all this, the occupation of the men with the horses and larger animals leaves to the women the care of the sheep when the flocks are driven home at evening. And, lastly, it is always the wife who has the responsibility of taking down and packing the kibitka, and setting it up in a new place, while the men take care of the herds. All these differences between the women of Tian Shan and those of the villages are the direct results of nomadism, and all of them tend to make the Khirghiz wife stronger, more capable, and more self-reliant, and hence a better and more loving mother.

In view of all this, is it going too far to say that the relatively free, warm-hearted, and affectionate spirit shown by the Khirghiz in their relation to one another is, in part at least, a geographic fact, the result of the reaction between man and his surroundings? In Karategin, at the eastern corner of Bokhara, I had a most pleasant glimpse into the inside of a Khirghiz family. As we entered the village of Kichik Karamuk, I spied a villager making a rude sledge of the sort which the semi-agricultural Khirghiz use for hauling grain and hay, and which they style "arbas," or carts. Of course I wanted to photograph it, and told my servant Sherif to tell the carpenter to sit out farther into the light. Sherif, for some reason that I did not catch, said that it was impossible, but as another servant put the man in the right place, I took the picture before asking any questions. The sledge-maker proved to be Sherif's brother, whom he had not seen for seven years. Out of sheer politeness the brothers remained silent till the picture was finished, then they embraced one another gently, as wrestlers might clinch before a struggle, first on this side and then on that, repeating very often and very fast the greeting, "Salaamet, salaamet, salaamet" ("Peace to you, peace to you, peace to you"). Later I saw Sherif meet another brother, the oldest out of nine, and an older sister, who had been like a mother to him. The grey-bearded older man, who was some twenty years older than Sherif, literally fell on his brother's neck and wept. The story of the Prodigal Son seemed very real just then. Meanwhile the wet-

eyed sister stood silent till her turn came. As she fell on her brother's neck she wept aloud for a moment, and then, still clinging to him, began to chant a song of thanksgiving; and so she continued for some minutes, first weeping and then singing. Feeling out of place, I went into the kibitka and sat down on the floor. After me came a chubby little urchin of three, with a rosy dirty face and a single scanty garment. A vague idea possessed him that some one had come whom he must welcome, so with a charmingly friendly smile he came and put his fat arms round me.

*Conclusion.*—This sketch of the mountains of Turkestan, and of the living things that inhabit them, is very far from being complete. To outline the physiography of the region; to describe the old peneplain uplifted into a plateau and warped into basins and ridges; to give an account of the consequent drainage, the glaciers, and the steep-sided young valleys contrasting with the smooth slopes of the old peneplain; and, lastly, to so frame the glacial theory as to fit the old moraines and terraces that everywhere abound,—to do all this is comparatively easy. The way has already been mapped out and made plain, and the subject has a definite classification where each fact finds a place. It is in the newer half of geography, the science of ontography, with its study of the relations between the animate and the inanimate, that the greatest difficulties are met. To thoroughly understand the relations of plants and animals to their geographic surroundings, one needs to be a botanist and zoologist, as well as a physiographer. In the still further reaches of geography, the ontographic relations between man and physiography, the subject becomes at the same time more interesting and more difficult. We possess an immense body of facts, but they are scattered here and there, unmatched and unrelated. We have not even a definitely recognized scheme of classification in which a place can be found for every fact as it appears. I have tried to take some of the chief facts in the life and character of the Khirghiz, and to show how they are related to the physiographic facts of the Tian Shan plateau. Beginning with the grosser, more material aspects of life, it appears that the nomadic pastoralism of the Khirghiz is due to the climate and vegetation of the region that they inhabit. On this are dependent the form of their houses, furniture, utensils, and dress, which in turn lead up to and determine the nature of their art. Again, the food of the Khirghiz is narrowly limited by the nature of their occupations, and this in its turn controls the large body of habits that centre about the necessity of taking nourishment. Another line of thought leads from the frequent movements of the Khirghiz to the character of their hospitality and to their politeness. Once more the plainly ontographic facts of the hardships of the nomadic life result in certain mental and moral traits, such as bravery, hardihood, and, unfortunately, laziness. Lastly, the conditions of nomadic life

determine the position and character of the Khirghiz women, and lead to certain of the higher moral traits, such as morality in the stricter sense, self-reliance, and even family affection. Other equally important subjects, such as government and religion, have been purposely omitted. In every case the attempt has been to proceed from the inanimate facts of physiography to the animate but still purely material facts of ontography, and thence upward by one road or another to the mental, the æsthetic, and the moral. It may be that I shall seem to many to have laid too much stress on the influence of the purely physical, and to have neglected the something, whatever it is, that lies above and beyond the physical. In reply, I can only say that the latter lies beyond the province of geography. I have tried to draw attention to the *relationships* between all that goes to make up the earth and air of the mountains of Turkestan on the one hand, and all that makes up the life of that region, whether it be vegetable, animal, or human, on the other. And as far as those relations have been truly conceived, this paper contains a part of the geography of Turkestan.

## SOUTH-WESTERN ABYSSINIA.*

By B. H. JESSEN, Engr. for W. N. McMillan's Expedition, 1904.

In the fall of 1903, Mr. W. N. McMillan, of St. Louis, Mo., U.S.A., organized an expedition which was to go through the Egyptian Sudan towards the districts lying north-west of Lake Rudolf—in other words, the south-western border of Abyssinia.

The object of the expedition was twofold, the main one being to explore as much as possible of the unknown countries lying between the Baro river at Itang and Lake Rudolf, and more especially to ascertain the topography of a mountain plateau called "Boma," lying directly south of the river Akobo in lat. 6° 35′ N., and long. 34° 30′ E. The secondary object was hunting, and, whenever possible, to collect birds and butterflies for the British Museum.

Without going into details, I will only say that the expedition members, consisting of eleven Europeans, thirty-two Somalies and Sudanese, and one Egyptian, were collected in Khartum in the middle of January, 1904, where two steam-launches, an oil-launch, and two big punts were waiting for them. A Sudan Government steamer towed the whole flotilla up the White Nile to the mouth of the Sobat river, then up the Sobat to Nasser, a total distance of 712 miles from Khartum. At Nasser the Government steamer returned, and the expedition proceeded in their own boats up the Sobat and Baro rivers as far as Gambela, in Abyssinia.

As these rivers have been thoroughly described by previous travellers, I will but say that, as at the time of the year when we went up

* Map, p. 244.