Vol. LXVI  No. 3  September 1925

Some Excursions in Oman  Major-Gen. Sir Percy Cox  193
The Demarcation of the Turco-Persian Boundary in 1913–14  Col. C. H. D. Ryder  227
Time Signals for Surveyors in the Field  Arthur R. Hinks  242
Southesk's Journey through the West  246
The De Filippi Expedition to the Himalaya: Review  T. G. L.  254
Imperial Stocktaking: Review  E. A. B., B. H.  257
Reviews  The Monthly Record  Obituary  Correspondence  v
Contents  vi
Society Notices  v
THE DEMARCATION OF THE TURCO-PERSIAN
BOUNDARY IN 1913-14

Col. C. H. D. Ryder

Read at the Meeting of the Society, 8 June 1925.

This Turco-Persian Boundary, the delimitation of which in 1913-14
I shall describe, is a boundary with a past. It is remarkable, if
for no other reason, in that the three main efforts to settle it have each
been interrupted by a great European war. Without delving too far
into remote ages, the Turco-Persian frontier more or less assumed its
present position early in the seventeenth century; frontier forays from
both sides were of constant occurrence, as was only to be expected in a
country peopled with independent warlike tribes far removed from the
very slight influence that could be exerted over them from either Con-
stantinople or Tehran. I doubt whether there was ever any keenness
on the part of the tribes themselves to have any general settlement of
the frontier at any time; there is so much more fun and freedom in the
raiding line when nobody knows exactly where the frontier lies.

By 1842 however the British and Russian Governments became
closely interested in the matter, a joint commission of investigation being
despatched to the scene. Amongst the British Commissioners were
Colonel Williams (the famous defender of Kars in the Crimean war) and
the Hon. Robert Curzon, a cousin of the late Lord Curzon. They seem
to have had many adventures; amongst them, the Turkish salute of welcome at Erzerum including a gun charged with round shot carefully aimed at and only just missing the British Commissioners.

The result of their efforts culminated in the Treaty of Erzerum, under which a commission of delimitation was appointed. The only records remaining are in the diary of the Russian Commissioner, Colonel Williams' papers being all lost in the Thames on their arrival in this country. The Commission wandered up and down the frontier zone from 1848 to 1852 in a leisurely manner, retiring to the hills for the summer. Their labours were also somewhat delayed by one of the rival commissioners every now and then breaking loose and building pillars on his own where he thought the frontier ought to run. Subsequent negotiations were broken off by the Crimean war, on the conclusion of which the British and Russian surveyors met at St. Petersburg, and after eight years' labour produced two separate maps. These were compared apparently for the first time after completion, and 4000 discrepancies were discovered in the first eight sheets. Nothing daunted they put their heads together and in another five years, i.e. in 1869, produced a joint map many yards in length entitled the "Carte Identique," a most beautiful artistic production. Unfortunately its accuracy was not equal to its beauty. How those 4000 discrepancies were adjusted no one knows; it must have been by splitting the difference or alternately accepting the British and Russian ideas on each detail.

Further discussion for another five years resulted in only one point of agreement: that the frontier lay somewhere in the country covered by the map, a zone occupying a width of 25 miles. Again was a settlement interrupted by the Turco-Serbian war, followed by the Russo-Turkish war of 1877. It was not until 1913, after another twenty-five years occupied by endless discussions in Constantinople and many frontier episodes, that a protocol was signed by all four powers concerned laying down on paper where about three-quarters of the frontier should run, and appointing our Commission to settle the remaining quarter and to actually demarcate the whole on the ground.

By this protocol the British and Russian Commissioners were appointed arbitrators in the case of the Turkish and Persian Commissioners being unable to agree; and more, important still, the latter two Commissioners had to submit to the arbitrators within forty-eight hours a statement of their cases: an invaluable proviso where the surroundings were pleasant, bad water, which we so often met in Mesopotamia, running it a close second as a spur to our decisions.

We commenced to assemble in December 1913; work began in the following month and ended in October 1914, by which time we had travelled from the Persian Gulf to Mount Ararat, demarcated the whole 1180 miles of the frontier (except 40 miles near Qurna), erected 227 boundary pillars, and made new surveys of the whole area concerned,
except where the frontier ran along well-defined natural features about which there could be no doubt.

From our meeting-place at Mohammerah we began delimitation by steaming down the Shatt al 'Arab to Fao just to look at the boundary, which lay on the high-water line on the left bank. Our steamer the Marmaris afterwards took part in the fighting on the river in 1914, when it was sunk. We then proceeded with much ceremony to plant pillar No. 1 where the frontier leaves the river between Mohammerah and Basra. To reach the spot we had to proceed up a creek in large "belums," and hammered in pegs to show the position of pillar No. 1 and its neighbour which was a direction pointer, the boundary then streaking away in a straight line to the neighbourhood of Kushk-i-Basri. We then adjourned to take part in a sumptuous Arab feast, provided by the Sheikh, to which those of us with the more delicate digestions failed to do justice, owing to a negro slave walking about amongst the dishes dismembering with his hands the whole sheep which formed the pièce de résistance of the menu.

While this was going on, masons were at work building the pillar, which they did with much zeal; and their previous experience being limited to the building of houses, they built themselves in the pillar, and a hole had to be knocked through to let them out.

On the return journey the tide had fallen and the "belums" had to be pushed by hand over the mud, the load being distinctly increased by the sumptuous lunch we had indulged in. We then made an excursion of a few days up the Karun river, landed, marched to the ruins of Kushk-i-Basri, fixed its position, and erected pillars to turn the frontier due westwards into the marshes.

The pillars we erected were a varied assortment, sometimes proper masonry pillars, at other times piles of loose stones or even mud heaps, according to the local material available. Our stay there was marred by a heavy storm of rain; it is unfortunate that in Mesopotamia the otherwise delightful cold weather is spoilt by its also being the rainy season.

The rivers, up to the point where the tide ceases to have effect, are bounded by thick palm groves; beyond this the occasional desolate group of palm trees, such as the one at which we landed, are generally shrines, the sanctity of which is so great that any one can leave his belongings there unguarded, a wonderful tribute in such a land of thieves.

We then returned to Mohammerah, which we finally left on February 17, steaming up the Karun to Ahwaz. The Anglo-Persian oil pipe line from the fields to Abadan passes along here. When it was first laid over the desert the temptation of firing a shot at it, and the resultant jet of oil spurting out, proved too great for the Arab. It was great sport. I have been told that the difficulty was got over by making the
sheikhs shareholders, thus rendering them materially interested in guarding the line.

The march across the desert, where we had our first view of the enormous flights of sand-grouse, brought us to the Karkheh river, the water of which is famous for its excellent quality. Tradition has it that Persian kings would drink no other, and had relays of horsemen conveying the precious liquid following them on their travels.

This river, like its neighbours, is unruly. It used to water the prosperous town of Hawiza, but one night broke its banks, changed its course, and left the town high and dry. The town of 30,000 inhabitants is now a mere village. Properly harnessed this river should water many hundreds of square miles of fertile land, instead of as now losing itself in the marshes; the difficulty however of all irrigation schemes in 'Arabistan is the absence of industrious cultivators, the possession of a grove of date-palms providing the easiest and also the laziest means of obtaining a living; I fancy, in the whole world. The old Sheikh of Mohammedah is reported to have said that the only way of making his country progress would be by cutting down every date palm, a drastic measure, though not far from the truth.

Striking the marshes, where I caused much amusement to the Arabs by shooting snipe—such a waste of shot over so small a bird—we picked up the frontier again at a spot with the local name of Umm Chir (the mother of pitch). Arab names are often charmingly descriptive; they call a snipe the “Father of long noses,” and a Sheikh described with grave politeness the visit to his village of one of our foreign colleagues who was above the average in girth: “This morning my village was honoured by a visit from the Father of bellies.”

The frontier had now to follow an old river-bed, the Shatt al ‘Ama, which sounded easy enough, but the problem was to find it, for there were many. After following several which petered out, we at last got on to one which answered the purpose, and although the morning had begun with much disputation, the Persians wanting us to search farther west and the Turks farther east, the heat coupled with the obvious fact that the ground, a howling desert devoid of water and vegetation, was valueless, led all parties to an agreement, and to our great relief after a long two days we finally reached the Duwairij river.

The British Commission leading the way (Captain, now Sir Arnold, Wilson being facile princeps in pushing ahead and pinching the best site for our camps), crossed the river and camped on the farther side, or, strictly speaking, in the bed. The river, fed by rains in the hills, then rose, and we had to make two very hurried moves before we reached safety. In a few hours a stream had become a large river and was foaming down 20 feet deep. Our colleagues had been watching our antics with much amusement, but the laugh was on our side when later in the day the river began cutting away its banks and they in their turn
Sketch-map of the Turco-Persian Boundary to illustrate the paper by Col. C. H. D. Ryder.
had to make hurried and undignified moves into higher ground. It was not till three days later that we got into communication with them by boat, and any one who watched that scene, and heard the continuous roar like thunder caused by enormous pieces of bank falling into the river, would realize the ease with which rivers in alluvial soil can alter their courses in a few years or even days. Delays like this to the main body were always utilized by our surveyors, who were enabled to work well ahead and have maps ready on every occasion.

I should like here to pay my tribute to the wonderful technical skill and energy which enabled Major Cowie to carry through triangulation till he joined up with the Russians near Urmia, and to the excellent work of my Indian surveyors, notably Khan Bahadar Sher Jang and Hamid Gul, who executed plane-table surveys mostly on the 1 inch = 1 mile scale of over 7500 square miles.

The boundary now ran partly on the crest and partly at the foot of the low Jabal Hamrin range, the foothills of the Pusht-i-Kuh. The crest of a range is not so bad an expression to describe a frontier, but the foot of the hills is a bad one. It is not often that hills end abruptly, they usually indefinitely melt into the plain; and we should have had much more trouble here had not our decisions been accelerated by the want of water. Even when found, as in the Tib river, its qualities proved similar to the most concentrated Epsom salts ever known, so that even the most fiery disputers as to where the boundary should lie became as lambs bleating out, "Put the boundary where you like, only let us get away."

There were however, even in this God-forsaken country, several localities where streams of good water, used for the irrigation of cultivated lands, issued from the hills; an oasis under such circumstances is all important. The Wali of Push-t-i-Kuh on the Persian side had a strong argument up his sleeve in his command of the water, and the Turkish towns of Mandali, Badrai, and others might have been destroyed had their water been cut off. Long and patient discussions followed, succeeded by heated ones. Even the temperatures of the British and Russian Commissioners must have been above normal!

Insurmountable obstacles can generally be got round, and so it was in this case. The increasing heat proving an additional argument, we were able to turn up through the very broken hills to Qasr-i-Shirin. During all this time our supplies, unobtainable from the barren country we had passed through, had been sent up by the river Tigris and thence by camel caravans to join us, our mails arriving in similar manner. Of incidents we had many. Sandstorms we were rather early for, but we had our share. A storm of rain was more welcome, though our tents were uprooted; it supplied us with drinking-water for several days, collected in every vessel we could find.

At Qasr-i-Shirin we had a well-earned halt while we refitted for the
colder climate of the north; our maps and reports were got up to
date, while the lighter-minded members of the Commission flitted away
to Baghdad to rest themselves in the delights of civilization. Even
we who remained behind felt civilized. We were on the telegraph
line, of which a word. For many years this line from Baghdad to
Tehran had a 20-mile gap where it passed through debatable territory.
The Turkish line up to Khanaqin was on iron posts, the Persian on
wooden poles of sorts; neither Turk nor Persian would agree to
Persian or Turk filling the gap. Finally, a solution was arrived at
and the line was built, supported alternately on a Persian wooden post
and a Turkish iron one, and every one’s honour was saved.

We had suffered on several occasions from thieves: our escort had
three horses stolen on one occasion, and the Russian Commissioner had
his full-dress uniform stolen on another. But the thieves at Qasr-i-Shirin
earned our respect. They not only stole the collection of the Russian
naturalist—much good might it do them—but they also collected the
bedclothes from over and under one of my Indian surveyors, a portly
gentleman, who woke up only in time to see his bed-clothes disappearing
through the tent door.

The ruins at Qasr-i-Shirin, the great throne-room of the Sassanian
kings, and the aqueduct, were well worth more time than we could spare;
while a few miles further on we struck the ruins of a great wall running
in a dead straight line across country, and said to be over 100 miles in
length: doubtless the work of some previous frontier commission whose
methods must have been even more leisurely than those of our Crimean
predecessors. It was the middle of May before we got started, and
though the weather was warming up, we were for the hills, and passing
by the Zohab plain, we crossed the shoulder of Mount Bamu and the
Shirwan river, known lower down as the Diyala.

We then moved to the slopes of the Avroman range, where a fortunate
dispute as to the evacuation of a frontier post by the Turks rendered a
prolonged halt necessary: but in what delightful surroundings! Gone
were the desert and the heat. Snow still lingered on the range above
us, while the narrow valleys in which we camped at a height of nearly
5000 feet were filled with walnut, mulberry and other fruit trees, through
which flowed sparkling streams of icy cold water fresh from the springs
for which this range is noted.

Only once did we dip down into the heat again, past the village of
Gulambar, famous for its large spring, and another village, deserted by
its inhabitants during the summer on account of a plague of snakes,
though we saw none. We had now got well into Kurdistan, and our
linguistic difficulties increased. In the south Persian or Arabic were
spoken on either side of the frontier. In either language some of us
were fairly proficient; but very few of our party knew Kurdish. We had
therefore to rely to a great extent on the services of an old guide,
Ibrahim by name, over 80 years of age, whose claim to know every inch of the country was not far wrong. This may be attributed to the varied assortment of wives he had espoused during a chequered career; one from each tribe seemed to be the average.

I had invaluable assistance in the spelling of names from M. Minorsky, the Russian Commissioner, a Kurdish scholar, whose stout upholding of Russian interests was often mellowed by the presence of his charming wife, who accompanied the Commission from start to finish. While on the personal note I might mention that we were a very happy party. Mr. Wratislaw, our Commissioner, was beloved by all. Captain (now Sir Arnold) Wilson was full of energy, mental and physical; while Captain Pierpoint, our doctor, Captain Brooke in command of the escort, Captain Dyer, our transport officer, and Mr. Hubbard the Secretary, each in his own line contributed to the work, and to what is even of more importance on a lengthy International show, the general gaiety and cheeriness which so softens the asperities of frontier discussions. Our relations with our foreign colleagues were of the very best, most cordial throughout.

We had passed through some rugged country—the regular Kurdish hills—the nature of which may be gauged by the names of two of them, the English translations being the "breaker of nails" and the "tearer of pants."

A disaster occurred at Piran, a pretty spot near the northern end of the Avroman range, the Persian doctor losing his hand from a gun accident. Tenderly cared for by Captain Pierpoint, he soon rejoined and pluckily accompanied us for some time.

In the neighbourhood of Vazneh (lat. 36°) we handed over survey work to the Russians, who had carried their 1-inch = 2 versits surveys down to this neighbourhood. This survey, only requiring amplification on the Turkish side, was sufficient for delimitation along the great range which now formed the frontier. Our services were however always called on to supply maps where the frontier crossed valleys, in fact the difficult parts; the Qutur district, for instance—a place which has the honour of a whole paragraph to itself in the Berlin treaty. Although we had to leave it undemarcated we executed accurate maps of the whole area.

Mr. Wratislaw had here to leave us owing to ill health, to our lasting regret; Captain Wilson becoming Commissioner, and myself Deputy Commissioner in addition to my survey duties.

On July 24 we left Vazneh, and the following day entered the treeless tract which extends to Mount Ararat and renders the country somewhat monotonous. The higher hills were however magnificent, the mountain meadows like the "margs" of Kashmir being resplendent with wild flowers.

The fixing of a frontier was however repugnant to the finer feelings
of the Kurds, and from "evidence received" we were left in no doubt that most of our pillars survived their erection a bare twenty-four hours.

It is so easy to lay down a frontier in the chancelleries of Europe and to agree that if Turkey makes a concession in the south, Persia shall respond in the north; but this is no consolation to the inhabitants concerned: they will not stand it at any price, when they live in inaccessible country remote from central governments. Full consideration must always be given to local opinions. I remember an instance of this on the Afghan frontier, which had been settled and pillars built thirty years before. We were carrying out our new larger-scale survey, and a pillar was found 3 miles out of position, not on the watershed as it should have been. This led to great excitement in the Foreign Department. A re-survey was ordered, but still there was the pillar 3 miles out of position. On inquiry however the local inhabitants acknowledged that years ago some sahibs had come and put up the pillar on the watershed, "but," said they, laughing, "we soon altered that; our grazing grounds had been given to the Afghan village and their irrigation-water had been given to us, so we made an exchange, had our own little boundary commission, and re-erected the pillar where it now stands in its proper place." How the question was finally settled I cannot say.

A short stay at the small Persian town of Ushnu was much enlivened by the warm hospitality of the Russian stationed there, hospitality which was by no means dry. Returning to the frontier we were startled on August 2 by the news of the outbreak of war. It will be realized that from thenceforward our position was somewhat delicate. We however continued our work under the orders of our respective Governments, and after a short stay at Urmia, whither we had moved to be nearer the telegraph line, again returned to the frontier. Here we experienced a most unfortunate incident. While out shooting chikor in the hills in an apparently peaceful atmosphere we were suddenly attacked by Kurds, who fired at us heavily as we retired without dignity to our camp, being unarmed ourselves except for shot guns. How we escaped being hit has always been a surprise to me, but unluckily Mr. Hubbard, who was out for a walk and had separated from us, was shot in the leg, and had to our great regret to be invalidated home.

A letter to Ismail Agha (the notorious Simko), the chief of the locality, brought him out next day with his band, and our would-be murderers were promptly seized and brought in, their only excuse being that they thought we were Russians! When Simko asked me whether he should hang the five men at once (more were seized later), I replied: "No; this is Persian territory and they must be properly tried." I am afraid his opinion of me fell. This cheery ruffian is still fighting, as he has been for the last ten years, Russians, Turks, or Persians, it does not seem to matter whom.

From now onwards, overshadowed as we felt by the Great War, there
was a decided slackening of interest in the work. Turks and Persians were very nearly abandoning the job, and the former several times received orders to do so, only to be cancelled by further contradictory orders. This had one good effect: every one worked with feverish haste to bring maps and boundary descriptions up to date.

In order to lessen the difficulties of transport and of getting out of the country at all, our escort marched back through Persia, the bulk of our party getting out through Constantinople by about the last train before the Turks came into the war. We could see Mount Ararat ahead—the goal of our hopes for the past year—and on its slopes and on the col joining it with lesser Ararat we placed our last pillars.

Saying good-bye to Turks and Persians twenty-four hours before the former came into the war, Wilson and I, the sole remnant of the British Commission, travelled by a somewhat roundabout route back to Mesopotamia and India—across Russia, out via Archangel, round the North Cape, down the Norwegian coast to England, and so by ordinary steamer to the East again.

As regards the technical survey work of the Commission, the greater part was undertaken by the British up to lat. 36° and by the Russians north of that point, the survey officers of the Turkish and Persian commissions having less experience; they none the less worked cordially with us and accepted our surveys without hesitation, a fact in great part due to the confidence inspired by our Indian surveyors, all Muhammadans.

As it would have been impossible for any system of rigorous triangulation to keep pace with the work of the Commission, the system adopted was as follows: Fao was connected in longitude with Bushire by telegraphic observations. Triangulation was carried up to Ahwaz, where observations were taken for latitude and azimuth, and a base measured with an Invar tape. Major Cowie then carried on a regular series of triangulation as far as Umm Chir, whence as far as the Tib river trigonometrical connection was maintained, partly by a regular series, partly by a short length of theodolite traverse.

From the Tib river the following methods were employed: From the advanced stations of the regular series points were fixed in the direction we were to march; when the Commission had marched to a suitable distance in advance of these fixed points, a base was measured, latitude and azimuth determined astronomically, and a small network of triangulation carried out. From stations of this network observations were made to the points already fixed in rear, permitting of the determination of the longitude of the network, and at the same time further advanced points were fixed and similarly used when the Commission had advanced beyond them. This process was repeated as often as necessary, the last occasion being at Urmia, after which the Russians assumed responsibility for further work, as they had already fixed many points by graphic triangulation on their large plane-tables. The closing difference
between our triangulation brought all the way up from the Gulf, and the Russian, was extraordinarily small.

It had been laid down in the protocol of November 1913 that the "Carte Identique" was to serve as a base for topographical work, but it soon proved insufficiently accurate for purposes of frontier demarcation. It was however decided for convenience that we should adopt the same scale as used on the old map, 1 inch = 1 geographical mile, or 1/73,050, and this scale was in general use up to lat. 36°, when the Russian scale 1 inch = 2 versts (1/84,000) was adopted.

The "Carte Identique" was accepted for (1) The Shatt al 'Arab. (2) The desert and march thence to Umm Chir. (3) Between the Tiber river and to near Baksai, where the frontier simply followed the foot of the hill. (4) The Shirwan river. (5) The Avroman range. (6) The Little Zab river.

The country traversed was, except between Mandali and Qasr-i-Shirin, easy to survey; the difficulties we had to contend with were:

(1) The want of water in the south and the great heat, which resulted in haze and an abnormal amount of refraction.

(2) The tension in the north owing to the war and the general restlessness amongst the tribes, Arab, Persian, and Kurd, along the whole frontier.

(3) The rapidity with which the Commission worked; this however was in part our own fault, it being due to the rapidity with which we surveyed.

The results of the survey were embodied in 25 new maps and 10 sheets of the "Carte Identique"; each nation had two copies of each of these 35 maps.

The photographs reproduced are lent by Mr. Wratislaw and other officers of the Commission.

Before the paper the President said: The name of our lecturer to-night, Colonel Ryder, is one which is well known in geographical circles in more countries than one. As Surveyor-General in India, he may be said to have been the head of the geographical world in Asia, but it is not merely upon the official positions he has held that his reputation as a geographer rests. The work of exploration which many years ago he carried out in China and Tibet won for him the recognition of no less than three different geographical societies, for he holds the Gold Medal of the French Geographical Society, the Silver Medal of the Scottish Geographical Society, and last, but not least, the Patron's Gold Medal of our own Society. But it is not on China or on Tibet that he is to speak to-night. He is to give an account of the final demarcation of the boundary between Persia and Turkey. As a member of the Boundary Commission of 1913-14, he succeeded, along with his colleagues, in bringing to a close a very long chapter of boundary history, a chapter which had lasted certainly—if we date it from the Treaty of Erzerum when Great Britain and Russia first took a hand in the game—for three-quarters of a century; and, if we go back to the sporadic attempts made by Persia and Turkey themselves to demarcate their own frontier, a very great deal longer.
It speaks volumes, I think, for the ability and industry of Colonel Ryder and his colleagues that in the comparatively brief space of ten months they should have been able to demarcate nearly 1200 miles of boundary in difficult mountainous country; to have set up some 227 boundary pillars, and to have made a fresh survey of practically the whole of the country concerned. I have much pleasure in calling upon Colonel Ryder to give us his paper.

Colonel Ryder then read the paper printed above, and a discussion followed.

The President: You have heard a good deal about Sir Arnold Wilson: his capacity for crossing rivers, for seizing the best camping ground, and for coping with strange feasts. Perhaps you would like to see him.

Sir Arnold Wilson: In the first place, I should like to congratulate Colonel Ryder on a most interesting lecture; his genial personality, and that of Mr. Wratislaw, did more than anything else to make the Commission a success. We owed much, too, to the spade work in the Foreign Office from 1910 onwards of Mr. Alwyn Parker, and in Constantinople of Mr. Minorsky; and to the amazing efficiency both of the surveyors of the Government of India who were with us—mostly of Afghan descent—and of the Survey of India, which reproduced our maps and sent out copies as fast as we could make them.

Colonel Ryder is under the impression that nearly all the pillars have been destroyed. It was true that they were pulled down a few months after they had been put up, but as far north as latitude 36° they have all been re-erected, not once, but three times—practically every two years for the last six years. That indicates the value attached by the respective Governments to the maintenance of the frontier, and the importance attached by the local tribesman to the removal of the pillars. The frontier has thereby been permanently established, because everybody knows where the pillars were; the mere fact of pulling a pillar down and putting it up every two years fixes the frontier in a way nothing else could. We have heard Colonel Ryder say some rather hard things to-night about the Kurds and Arabs; I do not propose to attempt to-night to put forward a sympathetic or sentimental defence of these pastoral races in their respective haunts. Colonel Ryder was in the country for a year; I have been there almost continuously for seventeen years. From Lurs, Turks, Armenians, Assyrians, Persians, Kurds, and Arabs I have received much kindness and much friendship, and if on occasions I have received evil at their hands—well, human nature is in my experience much the same everywhere, and I remain, on the balance, much in their debt. Within the limits of his own code the nomad can be trusted, is a good friend, and a loyal servant.

As regards the dislike of frontiers by Kurds, they have a conception of frontiers which is different from ours, but is quite reasonable. According to them, sovereignty is not vested in land but in human beings. Freedom of movement according to the season, the weather, and the year is essential to nomads, who must find good grazing in order to live.

If a Turkish tribe occupies a valley, that valley becomes Turkish so long as they are there; if they occupy it to the exclusion of others, the valley itself becomes Turkish; if a Persian tribe occupies for certain periods the valley it becomes Persian for those periods. The point is not one of importance in their eyes, and they quite naturally consider that a boundary-line which affects to settle the territorial question irrespective of grazing rights and tribal custom is unreasonable and a probable source of strife, for in some year tribes on either side of the frontier must cross it to get the pasture.
Finally, I am tempted to tell you a story related of Nadir Shah by Kotzebue. Nadir Shah completed his conquests in India and the East and decided to turn his attention to his western boundaries which the Turks were troubling. He collected an army and proceeded to the frontier, where he saw a great stone on which was an inscription to the effect that whoever, be he Persian or Turkish, attempted to enlarge his dominions at the expense of the other side and pass that stone would be eternally damned. Nadir Shah was lost in thought for a moment, and, recovering his self-possession, he ordered the stone to be uprooted, placed in a wagon, and carried before the army to the point which he designed as the limit of his conquests, where he set up the stone and returned in peace to his capital.

Mr. A. C. WRATTISLAW (British Commissioner with Turco-Persian Boundary Commission): I should preface my remarks by begging you to remember that anything I say refers only to the first two-thirds of the Boundary Commission, as a little south of Quasr-i-Shirin my acquaintance with it terminated and passed into the more capable hands of Captain, now Sir Arnold, Wilson. I think Colonel Ryder did himself very much less than justice when he attributed the confidence shown by the Turks and Persians in the British Survey work to the fact that he had Indian Mussulmans serving under him. As a matter of fact, from the moment when the commissions joined one another at Mohammerah Colonel Ryder established an unchallenged supremacy over his foreign colleagues, whether Turks, Persians, or Russians; they ungrudgingly recognized him as their leader. This was, no doubt, partly due to his being senior in rank to all of them, and partly to his obviously greater experience and technical attainments; but, if he will allow me to say so, I think it was due in very great part to the tact and geniality which distinguished him and which enabled him to avoid every possible cause of friction. I do not remember a single instance even of divergence of opinion amongst the survey party from beginning to end.

I listened with a certain amount of grief to Colonel Ryder's irreverent and, I might almost say, impious remarks concerning the "Carte Identique." This magnificent work of art, which was a perfect picture of a map, was entrusted to me much in the same spirit as the early Victorian father presented a Bible to his son on going out into the world. The Constantinople Protocol which created the Boundary Commission in 1913 was based entirely on this Identical Map, and a considerable portion of the frontier was already laid down on it. At first my colleagues and I regarded the map with reverence bordering on idolatry. You may imagine the wave of alarm and despondency that passed over the camp when iconoclastic survey officers started to prove that the map was all incorrect. I believe it turned out to be fairly accurate in the northern regions, and I still like to believe that, considering the difficulties its authors were exposed to in the south, it did not reflect so much discredit on the surveyors of eighty years ago.

The provision of the Protocol of Constantinople whereby any point on which the Turks and Persians failed to come to an agreement should be left to Russian and English arbitrators to decide was a far-sighted and wise condition. It was based upon most unfortunate experience. But it had one rather curious result in that it prevented the Turks and Persians ever coming to an agreement at all except on unimportant matters. They almost invariably played for safety and agreed to differ, preferring that the decisions should be left to the arbitrators, rather than that they themselves should make mutual concessions that might not be approved by their Governments and
might get them into trouble. I suppose it is human nature to make use of a lightning conductor when it is provided. The result was that any decision of any importance was left to the arbitrators, and, as a matter of fact, the British and Russian Commissioners did not always see eye to eye on every point. However, we muddled through somehow and managed to give the necessary decisions. There was really very little to go upon in settling any of these questions. The ancient treaties between Turkey and Russia were all extremely vague and capable of various interpretations, of which you may be sure the Turks and Persians availed themselves. We could never get any reliable information from the inhabitants, when there were any, of the districts through which we passed. I remember on one occasion we captured a wandering shepherd, and asked, "To whom does the ground you stand on belong?" He said it was God's own country, which was not very helpful and not exactly true! The facts seem to be that there were immense tracts of debatable territory over which neither Power in the distant past had ever established permanent sovereignty; the inhabitants thereof were more or less independent and were quite ready to change their allegiance from one side to the other when circumstances rendered it desirable to do so. Further, the character of much of the territory was so vile that it was a matter for wonder that either Power should think it worth while to quarrel about it, while the inhabitants were hardly such as a self-respecting power would care to have as subjects. Colonel Ryder has already paid them a few compliments. I say nothing further than that for the most part, whether Arabs or Kurds, they seemed to me to be lazy, dishonest, insubordinate, and verminous ruffians. We did not meet with any of the cultured sheikhs of romance. What we arbitrators tried to do, as a rule, when we could not trace any frontier at all, was to make as equitable a compromise as we could between the conflicting claims.

The British Commission started with about 200 mules, 50 horses, and over 100 human beings; and to provide for the needs of all these while passing through a generally desert country and almost always far from a civilized centre; to arrange for their marches and for camping-grounds and provisions, and the passage of rivers, and for guides, etc., was really a very considerable task. But Captain Wilson took it all on his own shoulders, in addition to his by no means light work as British Deputy-Commissioner. The whole thing went without any hitch or delay from beginning to end. We always had enough food for ourselves and forage for our animals, and, in times of stress, we were able to come to the rescue of the foreign commissions which were less ably conducted. If Captain Wilson had one speciality more than another it was the crossing of rivers, and one of my pleasantest recollections is of Captain Wilson in a jacket and a red pair of bathing drawers showing by precept and example how to take mules and loads across a rapid river.

The British never had much trouble with the natives except in the matter of thefts, and I think that was due to the presence in our midst of an extremely efficient doctor. Whenever we halted for more than a day or two and the news was noised abroad, all the sick people of the neighbourhood, most of whom had never seen a medical man in the course of their miserable lives, came and placed themselves upon the panel, and you could see scores of them collected round Captain Pierpoint's tent waiting for their turn to be attended to. That created an atmosphere of general friendliness from which we all benefited.

There were a certain number of minor obstacles to complete comfort on the Commission to which I might refer. Fleas, of course, go without saying,
and there were tarantulas and large fat centipedes about three or four inches long with vermillion heads, the sudden appearance of one of which on the bridge-table drove the lecturer in panic flight from the tent. A Russian Survey Officer was either less quick off the mark or less lucky than Colonel Ryder, for he got bitten by one and was in terrible agony for many hours. There were also scorpions. Two or three scorpions are nothing to write home about, but I confess I was taken aback when they brought me a whole shovelful of these disagreeable creatures which had just been scraped off the site selected for my tent. It is on record that when Moses led the children of Israel through the Wilderness the people murmured against him. If the people ever murmured against Captain Wilson—I do not say they did—it was on account of the unearthly hour at which he made us turn out in the morning in order that the tents might go on ahead and be ready for us at the end of the march. I think we usually started at about 4.30 a.m. The never-ending marches, generally under a blazing sun, became very tiring after a bit to at least one elderly and not very robust person. When I was younger I used to think that there was something romantic and even enviable about the life of a tramp. I have changed my opinion since.

Brigadier-General Sir Percy Sykes: I may perhaps add a word on one point to which but little reference has been made this evening. Not much has been heard of the Russian Commissioner, M. Minorsky, who is well known to the Royal Asiatic Society, and is one of the great authorities on Persian literature. I saw him last year, and he spoke enthusiastically of the friendly relations that existed between the British and Russian members of the Commission. I always knew it was a great deal owing to the character of the commissioners, but Sir Arnold Wilson has shed more light on the cause of the excellent relations that prevailed.

The President: I am sure you will wish me to convey to Colonel Ryder your gratitude for the paper which he has given us this evening. The hardships in those ten months, which in country such as he described to us must have been considerable, were largely disguised by Colonel Ryder by the device of interspersing his descriptions with amusing and interesting anecdotes. He told us, for example, of the interesting custom which some Arab tribes have of attaching the word "father" or "mother" to descriptive titles, such as the "Father of long noses" descriptive of the snipe, and the "Father of bellies" descriptive of a stout gentleman who had paid the village a visit. Some similar custom used to be, and probably still is, prevalent amongst the Turcomans who inhabit the country to the north of that described to-night. The practice amongst the Turcomans is to give to a child by way of name the first thing which they happen to see after the child's birth, and I remember coming across cases of Turcoman children who bore such strange names as "Very old woman," "Dust storm," and so on. That seems to be a somewhat similar custom to that of the Arab tribes on the Turco-Persian frontier.

Then Colonel Ryder referred to the characteristics of the Arab and Kurdish tribes, the chief of which appears to be theft, and that does not always go unpunished upon that particular frontier. It is almost twenty years since I was there, but I have to this day a most vivid recollection of being entertained by one of the Kurdish chiefs at a spot not far removed from Qasr-i-Shirin, and my genial host took me on to what corresponded to the village green and showed me an interesting little monument of brick and stone in the centre and asked me what I thought of it. As a monument I did not think very much of it, though I did not think it wise to say so. I asked what it repre-
sented, and I was told that it marked the grave of a man who had a few days before been caught and found guilty of stealing some of the chief's property. He had been walled up alive. That shows, at any rate, that theft does not always go unpunished upon that frontier, and perhaps, if such drastic punishment were meted out more often the character of the people might tend to improve, and theft become less.

I am sure we have all enjoyed Colonel Ryder's description of what undoubtedly is a historic event, the final demarcation of this difficult frontier between Turkey and Persia, which, as he reminded you in the course of his remarks, has troubled not only the Turks and Persians themselves, but the Governments of Great Britain and Russia for so long a term of years; and in thanking him for his paper this evening I would venture to add my own and your congratulations to him upon the success which has attended his labours.