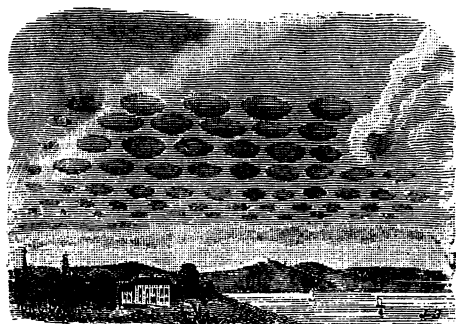


of Coffin's great work on the winds of the globe, is one of the most industrious, as well as one of the best, writers among the modern meteorologists. He has lately published a good-sized volume on climatology, in Russian, from which a sample chapter on the influence of forests is translated in a recent number of *Petermann's Mittheilungen*, to which we shall shortly refer. Besides this, the German and Austrian journals of meteorology contain frequent contributions from his study devoted largely to the discussion of the climate of the eastern dominions of Russia. Among these, that on the climate of East Siberia contains many facts of interest, especially in relation to the extremes of winter cold observed at Yakutsk and other low inland stations, where the average January temperature is close about the freezing-point of mercury. It is found that the excessive cold that characterizes the long, clear, quiet winter nights of that region is most severe in the low valleys, while the elevated stations have a distinctly milder winter, although still surely cold enough; so that at this season the air is generally warmer at a moderate altitude above the earth than at its surface. This inversion from the normal decrease of temperature vertically, had already been inferred by Hann to be a characteristic of the cold season of continental interiors, but its best observational proof is now given by Woeikof. It results directly from the ease with which the land cools by excessive radiation in winter, while the air which is slower to lose its warmth departs less from its average annual temperature. An example of a similar condition in this country is given in an account of the cold island in Michigan, by Alexander, in a late number of the *American meteorological journal*.



CLOUDS SEEN IN MEURTHE-ET-MOSELLE.

Millot, secretary of the Meteorological commission of Meurthe-et-Moselle, describes in *L'Astronomie* some very singular clouds which he observed in the morning of Dec. 18, 1882, directly after a rain-storm and severe squall from the west. Scattered equally throughout the pallio-cumulus rain-clouds were hemispherical grayish pockets slightly elongated, which Millot calls globo-cumulus clouds. They are represented in the accompanying cut.

Elfert, in his paper on cloudiness in central Europe, presents statistics of cloudiness from three

hundred and nineteen stations scattered generally throughout western Europe between latitudes  $39^{\circ}$  and  $60^{\circ}$ , and longitudes  $4^{\circ}$  and  $30^{\circ}$ . The stations range in height from near sea-level up to nearly nine thousand feet above. The periods of observation vary from one year to forty or more, and few stations have been occupied for a less period than three years. Statistics of the monthly, seasonal, and annual percentages of cloudiness are given for all these stations, showing a mean percentage of cloudiness in central Europe, in winter, of 69; in spring, of 59; in summer, of 55; and in autumn, of 64. The mean of the year is 62%. Over the greater part of the area under discussion, the maximum of cloudiness is reached in winter, and the minimum in summer; but in the alpine region these conditions are reversed, while in the low region of Holland and Belgium the maximum is in spring, and the minimum in the autumn. The distribution of the annual cloudiness shows little appearance of design, further than the general fact that cloudiness is more general in the northern than in the southern part of the area. The general tables are succeeded by discussions concerning the relations of relative humidity and of the direction of the wind to degree of cloudiness, and of the relative proportions of cloudiness at different times of the day. The paper is illustrated by maps and diagrams.

#### THE RUSSIAN EMBASSY TO AFGHANISTAN.

THE origin and growth of the present Russian empire are intimately connected with the courses of the great rivers of Russia. Between the White Sea and the Pontus Euxinus, the Baltic and the Caspian seas, the country, totally devoid of dominating elevations, bears the character of an extensive lowland, stretching towards the south. Orographically it may be considered as the continuation of the plains of central Asia, with which it is connected. Over this tract of land various Slavonic tribes, the present Russians, have been spreading at a more or less rapid rate, especially in a south-eastern direction. Subjugating those who offered resistance, they ever remembered the words, 'to conquer, or to perish,' — the proud device of Swätosloff, their first great leader. Unlike the bloodthirsty Asiatic warriors, themselves an agricultural people, they were the bearers of civilization, whether they moved toward the north, east, or south. In some directions their progress necessarily had to be slow; but it has steadily been going on for the past two thousand years.

*Reise der russischen gesandtschaft in Afghanistan und Buchara in den Jahren 1878-79*, von Dr. J. L. JAWORSKI. Aus dem russischen übersetzt und mit einem vorwort und anmerkungen versehen, von Dr. ED. PETRI, docent für geographie und anthropologie an der universität Bern. Bd. I. Jena, Costenoble, 1885. 12+427 p., illustr. 8°.

It is not difficult to comprehend the motives by which, in 1869, Russia was prompted to send her troops across the Caspian Sea; and it is likewise easy to perceive why, nine years later, she sent an embassy to Afghanistan, whose voyage is partly described in the volume now before us. The person intrusted with this mission was Major-Gen. N. G. Stolletoff of the imperial army. His command consisted of twenty-two Cossacks, a colonel, a topographer, three interpreters, and a physician. The latter, Dr. Jaworskij, who also performed the duty of historian, some time ago published two short volumes in Russian, containing the results of his observations. The first volume of this work has just been issued in a German translation.

Similar to other previous travellers, who have been visitors rather than explorers, the members of the embassy followed a single track, the shortest from one important point to the next, leaving the country to right and left unvisited. At the time the voyage was undertaken, the existing maps of the country had been mostly compiled from rough and unscientific observations. They were necessarily incomplete: places were located miles from their true position, rivers were running up hills, and mountains were set upon plains. Unlike most of his predecessors, Dr. Jaworskij, evidently accustomed to observing, had eyes to see, and ears to hear; and his descriptive power is certainly not of an inferior order. As a physician, he had rare opportunities to observe the family life of the various tribes through whose dominions the track of the embassy passed, and to study habits and customs which would probably escape the notice of the ordinary traveller. We watch him with true pleasure, making his preparations at Tashkend, the place from which the embassy started. We follow him to Samarkand, and thence to Dsham. We get acquainted with the genuine hospitality of the Bokharians, with the mode of life of the members of the embassy while at Karshi, and the ceremonies accompanying the receptions given by the emir of Bokhara. Leaving Karshi, the travellers wended their way across the steppe, to Amu Daria. While attempting to cross the river bearing the same name, they met with serious difficulties, as the Afghans would not permit them to land on their native soil. This obstacle, however, was soon overcome: they were made at home by the officials of Amu Daria, and received a military escort of three hundred men to take them across the desert to Mazár-i-Sharif, where they were welcomed by the serdar, at the head

of several regiments of soldiers. Notwithstanding all the precautions taken, most of the Russians suffered severely from the local malarial fever, which induced them to leave their quarters sooner than their suspicious hosts had originally anticipated. Accepting an invitation, tendered them by the emir Shir-Ali-Khan, to come to Kabul, they set out for that place after a fortnight's sojourn. Kabul was to be the terminus of their voyage.

Passing the valley of the Amu Daria, of which the author gives a graphic description, which may be considered a brief monograph, the travellers followed the banks of the Khulm. They then moved through Dere-i-Sendan, termed a glen in the narrative, but which, according to the account (p. 231), appears to be a regular extensive cañon, with perpendicular walls of an average height of about five hundred feet. Unfortunately, Dr. Jaworskij does not seem to have paid much attention to the geological features of the country traversed, for his observations in this respect are more than meagre. To go into the interesting details of the voyage to Kabul, would exceed the limits of these columns, and we therefore have to refer the reader to the volume itself. It may suffice here to state that the first mountain pass crossed on the way to Bamian was that of Tshembarak; but we cannot omit mentioning the description of the vast caves in the Bami-an valley, and the colossal stone images, representing human figures, which adorn their entrances. These rude statues, hewn out of the native rock (a conglomerate, according to the author), with which they are still connected by their backs, vividly remind us of the sculptures of Easter Island. They are represented on the plate facing p. 280. The entrances to the caves open between the legs of these images, which are loosely draped, and whose sex remains doubtful. It would be of interest and importance to unveil the true character of the dark round spots scattered over the apparently perpendicular and projecting narrow surface, which reaches from the ground almost to the broken-off elbow of the largest figure on the above-named plate. Until better informed, we should feel inclined to consider them as so-called cup-cuttings.

Having traversed the Sefid Khak, the last mountain pass to be crossed, the embassy, on approaching the goal of their voyage, were met by a vesir, who gave them a warm, brotherly welcome. He embraced the general and his officers, placed his saddle-elephants at their disposal, and escorted them to Kabul, where spacious quarters had been provided for them by

order of the emir, who sent word that he would be happy to receive them. The day following the friendly reception, the Russian ambassador examined the presents sent by the governor-general of Turkestan to be delivered to the chieftain, and found to his great dismay that they consisted of almost worthless things. According to the author, they were shabby to behold, and beyond the most indulgent criticism. Gen. Stolettoff, anxious to prevent the reputation of his country from being damaged by a fraudulent governor, selected three of his best horses given him by the emir of Bokhara. He had them provided with richly ornamented Bokharian saddles, with brocade blankets, and the officers cheerfully added their silver tea-set, most of their plate, some costly fire-arms, and various other valuable objects. The emir graciously accepted these gifts, sending in return 11,000 rupees, which, after some remonstrance, had to be accepted by the Russians in order not to offend the princely donor.

During their sojourn at Kabul, two events of importance took place. The heir to the throne of Afghanistan died after an illness of only a few days. In consequence thereof, the paragraph in the projected Afghano-Russian convention, that "the imperial Russian government recognizes Abdullah-Dshan as heir to the throne of Afghanistan," was changed as follows: "The Russian government is ready to recognize as heirs such persons as may be nominated by Emir Shir-Ali-Khan."

Shortly afterwards the emir received the unexpected message that an English embassy was under way to pay their respects to him, and that he should receive them "according to the usage of hospitality becoming to a good neighbor of India." This piece of news was surprising, for two years previous the emir had entirely fallen out with the English. Under these conditions, he could by no means receive the embassy. Like a good diplomat, he used the recent death of his son as a pretext, and informed them that he was in mourning; but to no effect. The English insisted upon being received. After holding a consultation with the Russian general, he sent them the only possible answer: he emphatically declined to receive them.

On the 11th of August, Gen. Stolettoff, accompanied only by the author and a number of Cossacks, suddenly left Kabul. Twenty days later, they again reached Samarkand, after an absence of almost fifteen months. The rest of his staff had been directed to remain at Kabul to await further orders.

We regret that we can dwell no longer upon this interesting and timely work, but we hope that we shall soon have an opportunity of reviewing the second volume, which has not reached us. We wish the translator might have displayed a little more artistic taste. That he has performed his work with minute correctness, cannot be denied; but his German style is by no means elegant. Sentences like the following, — '*Ich wollte furchtbar schlafen,*' or '*Sie werden sich zerschlagen*' (p. 137), — remind us too vividly of the idiom used by Señor Pedro Carolino in his 'English as she is spoke.' It is true that he states in his preface that he had attempted to render his translation as correct as possible; but we are far from even admiring the language of his introduction. We are, however, indebted to him for a better track-map than the one in the original, though the orthography of the names in the text does not always agree with that on the map.

#### THE RUSSIANS AT THE GATES OF HERAT.

No higher compliment could be paid to Mr. Marvin's little book than the fact, that, within ten days after it appeared, it formed the basis of leading articles on the Afghan dispute in nearly all the principal papers in the country, and in most of them without any acknowledgment. No one but a man who had made a most careful study of the subject could have condensed so much, and such timely, information in such small space and on such short notice. The preface bears the date of March 23; and the book gives the clearest possible insight into the progress of Russia's advance from the Caspian during the last few years, the purpose and aim of her movements, the origin of the boundary dispute, and its condition on the date named. With the aid of this book, the telegrams in the daily papers become clear and intelligible, and any one can follow the development of events hereafter with a clear understanding of them.

Mr. Marvin has passed a considerable part of his life among the Russians, and understands their language. While he is naturally alarmed at Russia's progress, and opposed to her intentions, yet he writes in a calm and moderate tone. He always strives to be just, and comes as near being so as is possible when one is a party to a controversy. In his inter-

*The Russians at the gates of Herat.* By CHARLES MARVIN. New York, Charles Scribner's sons, 1885. 10+185 p., illustr. 16°.