

from the north or north-west; those on the Pámir steppes are mostly from the west; and those on the Karákoram and Kuenlun are mostly from the south and south-east. These may be taken as the main directions whence the winds blow in each region respectively, but their currents must be diverted by every obstructing ridge and conducting defile. This is well exemplified on the passes of the Karákoram and Tíbet range, and at each camp ground may be seen stone walls, raised as a protection to the traveller from the keen blasts of the prevailing winds; but in no two of them will they be found in the same general direction, except on the wide tablelands; and there the general turn of the curved walls to the north and west corroborates the popular report as to the prevalence of winds from the opposite directions.

The general absence of wind in the summer and winter seasons on the plain is a condition favourable to the country as a habitable region. For otherwise the perpetual clouds of dust and sand in the one season would materially interfere with the operations of agriculture and the daily pursuits of life; whilst the intensified cold in the other would prove inimical to all forms of life under the existing circumstances.

The intensity of the sun's rays on the plains of Káshghar is a notable feature of its climate and a phenomenon that requires explanation, because its effects upon the sensibility of man are out of all proportion more perceptible than on that of mercury. The highest temperature recorded during our stay in the country from 1st November to 24th May was 140°F. by a maximum thermometer placed in the direct rays of the sun, yet the exhaustion produced in man by exposure to a sun which indicated considerably less than that degree by the thermometer, I observed was much greater than anything I had ever noticed in India. None of our camp followers could walk a march even in an early sun, and our cattle exhibited more distress than is usual in India. The natives of the country, too, are equally prone to its effects, and cannot endure toil in the sun. It was a subject of common remark amongst us that in all our marches we rarely met a traveller on foot and rarer still, if ever, saw one carrying a load. Everybody in the country rides, either on horse, camel, ox, or ass, or he travels by cart. Judging from my personal experience I am disposed to attribute this inordinate action of a by no means tropical sun to the combined effects of a very dry atmosphere and refraction of caloric with blinding glare from an arid soil of salines and sand.

Not less notable than this action of the sun's rays is the wide range of the atmospheric temperature in the circle of the seasons. July is said to be the hottest month of the year by the natives. I have no data whereby to judge of its temperature. From the observations recorded by Dr. Geo. Henderson, during his visit to Yarkand with Mr. Forsyth in 1870, the temperature of the air on the plain country towards the close of August may be taken at 79°F. In May, according to my own observations, the maximum temperature in the shade was recorded at 97°F. on the 19th of the month at Yakshamba Bazar, two marches to the south of Yárkand city. The minimum temperature of the air was recorded at 20°F. below zero on the 19th February at Tigarmiti near the Súghún valley at the foot of the mountains north of Artosh.

These may be taken as the extremes of heat and cold in the course of the year, but are no criterion for the diurnal alternations, which as a rule are very equable; whilst at the same time the transition from one season to the next is a gradual process, singularly free from the sudden and great variations of temperature that characterise the climate of some parts of the Punjab. This will be seen by an examination of the meteorological records appended to this report.

The seasons in the plain country are distinguishable into four of equal duration, but in the mountain regions there are only two seasons—a summer and a winter—for the spring, summer, and autumn in those elevated tracts run rapidly together, and may be considered as lasting only from the beginning of June to the end of September. The other eight months are winter, of greater or less rigour according to altitude, during which frosts prevail and vegetation is dormant.

The winter or *cish* extends over the months of December, January, and February. It is a cold, still season, with a more or less constantly overcast sky, and an atmosphere rarely disturbed