the SΛV. and the W., that is, invariably away from the direction of the prevailing winds; but in some parts the steep faces are those fronting the E. and the S. In the desert of Cherchen, however, where the general height of the dunes in the N.E. is uniformly greater than in the desert of Takla Makan proper, reaching up to 350 ft., the configuration is complicated by the appearance of elongated expanses of level clay called *bayirs,* varying in size from half a mile to a dozen miles in length, barren and tinged with saline deposits in the middle, with scanty vegetation around, and lofty sand-dunes overhanging them on both sides. These elliptical, cauldron-shaped basins all stretch from N.E. or E.N.E. to S.W. or W.S.W., and are arranged in long curving chains, the successive depressions being parted by transverse ridges of sand. They owe their configuration in great part, perhaps entirely, to the prevailing wind.

On perfectly level ground the dunes arc crescentic in shape, have a steep face towards the W., are highest in the centre, and slope away in each direction towards the two horns or cusps of the crescent. On the windward side they have a convex, spoon-shaped slope, regularly formed, but crumpled by tiny sand-waves or ripple-marks. “ With regard to the large accumulations of. sand (in the desert of Cherchen) we have ascertained the following laws—(1) In the N. of the desert they turn their steep faces towards the N.W., in the middle towards the W.N.W., and in the S. towards the W. and W.S.W. ; (2) their eastern slopes ascend rather slowly towards

their crests; (3) on the other side their steep leeward faces go down sheer at an angle of 33°, or else in two or three steps ; (4) their mass diminishes towards the S.; (5) they are each built up of an innu­merable number of individual dunes; (6) although their relief is influenced by winds from other quarters than the predominant, their mass is unaffected by them ; (7) it is their varying breadths which give rise originally to the thresholds, and consequently to the formation of the bayirs ” (Sven Hedin, *op. cit.* i. 362).

The bayirs become progressively rarer, less distinct, and smaller in size as one advances from E. to W. At the same time the arrangement of the sand-dunes grows more and more irregular, and the dunes themselves plunge steeply down towards the W., the S., and the S.W., and arc drawn out towards the N.N.E. and S.S.W., the N. and S. and the N.W. and S.E. In that part of the desert two systems of dunes are distinguish­able, intersecting or rather crossing over one another diagonally or at right angles. In the extreme west, at Ordan-Padshah, between Kashgar and Yarkand, the dunes travel annually some 13 ft. towards the S.E., not towards the S.W. The principal cause of the difference between the arrangement of the sand- dunes in the desert of Cherchen and the arrangement of the sand-dunes in the desert of Takla Makan proper in the W. is the wind. In the latter, winds from several quarters co­operate to mould the relief of the desert into capricious and changing outlines; but in the E. the wind blows not only with greater regularity from one settled direction, the N.E. or E.N.E., but also with much greater violence. Indeed, it is in the open Lop country, where the mountains, the Kuruk-tagh on the N., and the Astin-tagh on the S., are the nearest to each other, that the wind develops its greatest and most concentrated energy@@ In the E., where the sand waves are most exposed to the fiercest wind, they form elongated waves, distinctly out­lined, corresponding to the breakers of the ocean. They dis­seminate themselves westwards over the desert in ever-widening concentric circles. The curving courses of the Tarim and the Koncheh-darya are the only check upon the invasion of the Takla Makan by the sand which is generated in the desert of Lop or further E. and N. in the mountains which girdle the desert of Gobi. But the former river is itself encroaching upon the N.E. margin of the desert, and pressing more and more towards the SAV.

With regard to the origin of the stupendous masses of sand that fill the basin of the Tarim, K. Bogdanovich considers them to consist for the most part of the disintegrated products of the fine­grained alluvial clays of the desert itself. On the other hand, G. N. Potanin and V. A. Obruchev both seek for its origin in the hard rocks of the mountains which encircle the deserts ; and in this view, subject to certain modifications, Sven Hedin is disposed to agree. But he adds@@that the masses of sand themselves “ are

derived from three separate sources, in part directly, in part in­directly—(1) the direct transportation by the wind of the products of disintegration from the adjacent mountains, whether sandstones or crystalline rocks; (2) through the activity of the wind operative amongst the arenaceous alluvia of the rivers and temporary lakes; (3) through the sand that was already present in the soil, and which became exposed in rings more or less concentric in proportion as the former (Central Asian Mediterranean) sea dried up.” Of these agencies the river Tarim makes by comparison much the smallest contribution of disintegrated material to the volume of sand. The area covered by sands in the desert of Takla Makan proper is esti­mated at nearly 116,000 sq. m., and the area covered by them in the desert of Cherchen at nearly 143,000 sq. m.

Vegetation and animal life are extremely scarce. The former is practically confined to various steppe plants, *kamish* (reeds), tamarisks (almost invariably growing on root-mounds), and poplars. The animals are hares, rats and one or two other rodents, foxes, and in a few places the wild camel.

The climate is one of extremes. At Merket on the W. verge of the desert of Takla Makan proper the winters are cold, though the snowfall is small, while the summers are hot. In the desert of Cherchen a temperature of -22° F. has been observed in the depth of winter, and there snow sometimes falls heavily. During the sand­storms which sweep over the region in spring, the thermometer drops as much as 10° or 12° F. below zero. On the other hand, a temperature as high as 86° has been recorded in the end of April (cf. Gobi). It is only in winter that this appalling desert can be crossed with any degree of safety. It is destitute of water, but in winter it is possible to transport ice on the backs of camels. Some­times for days together the desert is enveloped in an impenetrable dust-haze, which chokes and smothers every living creature. In the second half of the 13th century Marco Polo left a vivid descrip­tion of this desert and related legends associated with it (see the edition of his travels in English by. Sir H. Yule, ed. 1903). The fullest account by a modern writer is that given by Sven Hedin in his *Scientific Results of a Journey in Central Asia,* 1899-1902 (Stock­holm, vols. i. and ii. 1905-6); see also his *Through Asia* (London, 1898), vol. i. For archaeology, see Turkestan. (J. T. Be.)

**TALAING,** more accurately called Môn, the name given to the remnant of the Peguan race, which for long strove with the Burmans for the ascendancy in what is now Burma. In the middle of the 18th century the Peguans were masters of the country from the Gulf of Martaban to far to the north of Mandalay. Now, however, the Talaing population is practically confined to the Tenasserim and Pegu divisions of Lower Burma, and even there it seems to be dying out. According to the census of 1901 they numbered only 321,898 persons, of whom 154,480 spoke the Talaing language. The Talaings are, histori­cally, the most important representatives in Burma of the Môn- Annam linguistic family, who have left tokens of their presence from the Khasia Hills in Assam to the Gulf of Siam. The origin of the name Talaing is disputed, but it is most commonly believed to be a term of reproach, meaning “ downtrodden,” given by the conquering Burmans. The people call themselves Mons. They are lighter in complexion and more sturdily built than the Burmans and the face is rounder.

**TALAR,** the architectural term given to the throne of the Persian monarchs which is carved on the rock-cut tomb of Darius at Nakst in Rustan, near Persepolis, and above the portico which was copied from his palace.

**TALAVERA DE LA REINA,** a town of central Spain, in the province of Toledo; on the right bank of the river Tagus, and on the Madrid-Cáceres railway. Pop. (1900) 10,580. Talavera is of great antiquity, the Caesobriga of the Romans. Portions of the triple wall which surrounded it remain standing, and the Arco de San Pedro is one of its Roman gates restored. Among the ancient buildings are the Torres Albarranas, built by the Moors in the 10th century, the Gothic collegiate church, and three secularized convents, one of which dates from the 14th century, but has twice been partially restored, and is now a factory. The bridge of thirty-five arches across the Tagus dates from the 15th century. Talavera “ of the queen ” was so named because, from the reign of Alphonso XI. (1312-50), it was the property of the queens of Castile.

For the operations which culminated in the famous battle of Talavera, between the English and the French, and those which followed that engagement, see Peninsular War. Sir Arthur Wellesley (afterwards Duke of Wellington), the British commander, acting in co-operation with Lieutenant-General Cuesta’s Spanish army, took position on the 27th of July 1809 on the Upper Tagus,

1 Sven Hedin, *op. cit.* i. 364.

*2 Op. cit.* ii. 448.