

plain and the swamp are absent, and the lake at high water meets the gravel desert. In approaching Sistan on this side by the ordinary route from the northwest, the traveler must pass through the Gate of Bendan, a gorge cut across a low ridge of limestone. The bottom of the gorge is filled with fine alluvium, chiefly silt, which is rapidly being cut away by the stream (cf. the Kanab canyon in Utah, ante p. 272). The latter has intrenched itself to a depth of 20 feet. This gate is remarkable for its large grove of date palms, which flourish here in the shelter of the mountains, although elsewhere in Sistan the violent wind prevents their growth.

Southwest of Bendan the alluvium of the gorge broadens into the gravel-covered desert of Sistan. As far as the eye can reach it encounters a smooth expanse of small dark pebbles, clean swept by the wind, and devoid of vegetation except for a small bunchy weed every two or three hundred feet (fig. 164). Valleys are incised in this plain, but are so sharply depressed as not to break the lifeless monotony of the gravel, which is only interrupted by islands of buried mountains. The valleys are

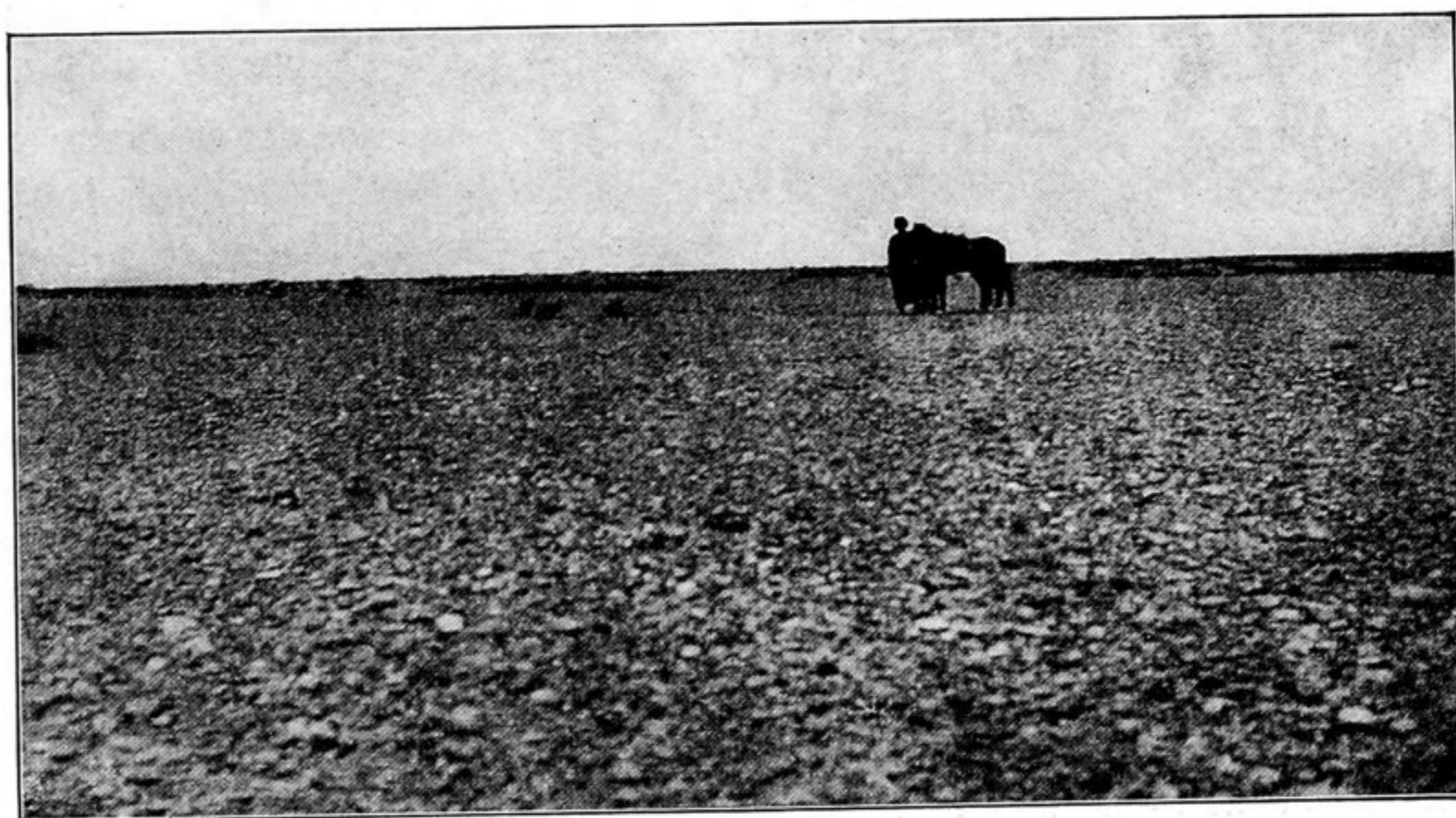


Fig. 164.—A Typical Portion of the Gravel Desert northeast of Sistan.

universally terraced. Along the Bendan stream a second terrace soon develops below that at the gate. These two continue to the mouth of the valley, varying in height, but very persistent. In many places a third small terrace appears below these, but it is not persistent. All along the west shore of the lake the same thing seems to be true; the main streams are bordered by two good terraces and there are traces of a third. In the side valleys the two lower terraces soon disappear.

East of Bendan the gravel desert suddenly comes to an end in the steep bluffs which border the lake on the northwest. At Bereng, where the road to Sistan crosses the "hamun" (swamp) the bluffs are only 20 or 30 feet high, and stand somewhat back from the water. Farther north, however, they approach the water until they are undercut by it and form almost perpendicular cliffs 100 feet high. Still farther north, near Kharikha and Kuh-i-Chaku, the total height of the bluffs becomes 300 or 400 feet, although they stand farther from the lake and are not to-day being undercut. Just how far these bluffs extend is not known. I followed them for 40 miles from Bereng to the northwest corner of the lake, and saw them