

the builder or was merely a result of their having caught and retained the sand and small pebbles which gales of special violence had driven against them could not be determined.

Purpose of stacked fascines.

There was no doubt that the Toghrak sticks which were found driven vertically through the fascines had been intended to secure them when first stacked. But no strengthening of this sort was needed any longer; for, through the action of the salts which had permeated both the fascines and the soil, the reeds had attained a quasi-petrified condition and considerable consistency, though each reed, when detached, still showed a good deal of flexibility in its fibres, as proved by the specimen T. XII. a. 0041. It was this very quality, no doubt, which together with the extreme dryness of the climate had enabled these stacks of mere reed straw to withstand the destructive effect of two thousand years. But what could their original purpose have been? The regularity with which these strange stacks were laid out at T. XII. a, and also, as Plate 38 shows, at the neighbouring post T. XIII, made me at first think of some defensive purpose, as if they had been intended for a zareba. With such a supposition it would have been possible to reconcile the evident fact that some of the stacks, both at T. XII. a and also elsewhere, were found to have been burned, their position being still clearly marked by plentiful calcined fragments, of which the slag-like pieces, T. XII. a. 004, 0037-38 (Plate LII), are specimens. But this idea had very soon to be abandoned when I subsequently came across remains of exactly similar stacks at other watch-posts quite irregularly disposed where, as at T. XI, the ground near the towers was much cut up by ravines or otherwise restricted.

Size of fascines same as in Limes wall.

Another suggestion promptly presented itself when repeated measurements showed that the dimensions of the neatly laid bundles of reeds always corresponded exactly to those of the fascines used for building the Limes wall. It seemed easy to assume that these were stacks of the fascines kept ready at the watch-stations along the wall for any urgent repairs. Thus eventual breaches in it, from whatever cause they might arise, could be quickly closed without the necessity of collecting and carrying the required materials over a considerable distance. Seen in this light, the stacks of fascines at once reminded me of those of wooden sleepers that we see neatly piled up at railway stations. The explanation appeared plausible enough, as it accounted for the identical length, 7 feet, of the fascines both in stacks and wall, and I still think that the size was originally determined by the structural requirements of the wall. But, as regards the main purpose for which the fascines were kept stacked, subsequent observations have led me to form a different view.

Stacks found at T. VI. b.

It was first at the headquarters station T. VI. b of the south-west flank of the Limes, described above, that I became fully convinced of the need of another explanation. There I found, as already briefly mentioned, the remains of a series of exactly similar stacks, six in all, extending along the east and south-east edge of the plateau, with intervals of about 20 to 30 yards between them.¹ That in these stacks some of the fascines consisted of reeds and some of small Toghrak branches, the fascines of different materials being placed in alternate layers, did not surprise me; for on that flank of the Limes both materials were equally close at hand. But the fact that there certainly never existed a wall near T. VI. b or anywhere else along that flank of the Limes plainly proved the previous explanation of the stacks to be untenable.

Stacks in calcined condition.

Then it came back to my mind that, not only at T. XII. a but also at other watch-stations, such as T. XIII, T. XV. a, etc., I had found some of the stacks reduced by fire to mere calcined fragments. It was, of course, possible to explain this as wilful damage done by raiders and the like. But a far more satisfactory explanation both of the partial burning and of the main purpose of the stacks was obviously to be found in their use for fire-signals. That a system of such was regularly organized along the Limes could be assumed *a priori* as highly probable, and that there was evidence of it

¹ See above, pp. 650 sq.