

by means of signal-fires, to give the alarm in case of attacks on the border, was in use before Han times. A distinction is made in those texts between fires, called *fêng* 烽, which were intended to produce thick smoke for signalling in day-time, and others, known as *sui* 燧, the clear flame of which was to be visible at night.² Thus the general Ma Ch'êng, who in A. D. 38-43 organized the northern frontier defences along certain stretches, is said to have 'organized fire-signals for the day (*fêng*) and night (*sui*). There was a watch-tower at every 10 li.'³ In practice the term *fêng* came to be applied to any signal-fire, and it is thus that the watch-towers, which in our documents are ordinarily designated by the term *hou* 候, are sometimes in the texts called also *fêng hou* or simply *fêng*.⁴ A passage quoted by M. Chavannes from a text of T'ang times adds an interesting detail which indicates a further development in the system of signalling: 'The watch-towers were on the average 30 li from each other; when they lit fire-signals, they produced one flash *chii* 炬, or [in succession] two or three or four flashes in accordance as the invaders were more or less numerous.'⁵

Signalling
by flashes.

It is easy to realize the importance of the help which a carefully maintained signal service of this kind could afford for giving the alarm to the Limes troops and effectively warding off raids or more serious attacks. M. Chavannes quotes passages from the Former Han Annals emphasizing this importance, and we find it fully reflected also in the document No. 432. This notice, 'to be posted in a visible place of the [locality of] the company of the *t'ing* so that all may know by heart and understand it', directs 'that a perfect supervision should be kept, and that, as soon as there may be a fire-signal, the company of the *t'ing* should light one in turn. Let there be no negligence.' We can, therefore, appreciate the contrition with which, in *Doc.* No. 567, an officer of the 'Yi-ho barrier' accuses himself of not having 'properly observed in the supervision of the fire-signals' and expresses the wish to denounce himself by a deposition at headquarters.

Importance
of signal
service.

The distinction between smoke-signals for day-time and fire-signals for the night is duly made in *Doc.* No. 552, which we had occasion before to discuss in another connexion.⁶ A further detail recorded in the above passage of the T'ang text receives confirmation from a series of documents from T. VI. b, Nos. 84-7, which record the reception of flash-signals, here called *chii huo* 炬火 (literally 'torch fire'). The time of reception is exactly indicated by month, day, and hour; the eastern direction from which the signals came is noted, and in one case also the name of the man who had made the observation. As a curious relic may be mentioned the large but not completely preserved board-like tablet, No. 278, T. XXII. b. 6 (Plate IX), bearing the inscription, obviously meant as a label: 'Signal-fire of the Ta-wei barrier'. Its original application is doubtful. Uncertain, too, seems the interpretation of Nos. 694-5, apparently fragments of the same document, in which the pole of a burning stack, 30 feet long, and a difficulty about extinguishing the fire are mentioned.

Records of
smoke and
fire signals.

It is obvious that if the bulk of the troops kept available for the safeguarding of the Limes were, as we have seen good reason to believe, maintained, as military colonists or otherwise, within the

² In one of the passages quoted from a poet of the second century B.C. in Ssü-ma Ch'ien's *Shih-chi*, *ibid.*, we read: 'As soon as the soldiers of the frontier commands learned that the bonfires for day-time had been set ablaze or the fires for the night-time been kindled, they all took their bows and started off at a gallop, armed themselves, and departed.'

³ Cf. Chavannes, *Documents*, p. xii, with note 1 for reference to the *Hou Han shu*.

⁴ M. Chavannes, *ibid.*, points out that in Hsüan-tsang's *Life* the five watch-towers, each at 100 li distance, which were to be passed by the pilgrim after leaving the Jade Gate, and to which detailed reference will be made below, chap. xxviii.

sec. i, are called *fêng* 烽.

⁵ Cf. *Documents*, p. xii, note 5. The production of successive flashes was easy if use was made of a torch, a meaning which the word *chii* 炬 seems also to bear. It is easy to see that modern flash-light signalling (on the Morse system) meant only a slight step forward. [For Mr. Hopkins's different interpretation of the passage quoted by M. Chavannes, cf. *Add. & Corr.*]

⁶ Cf. above, pp. 709 sq., where a possible location of the watch-post referred to as being too far for the observation of signals has been suggested