

# Upper Daling Surface Sherd Density Data Screening

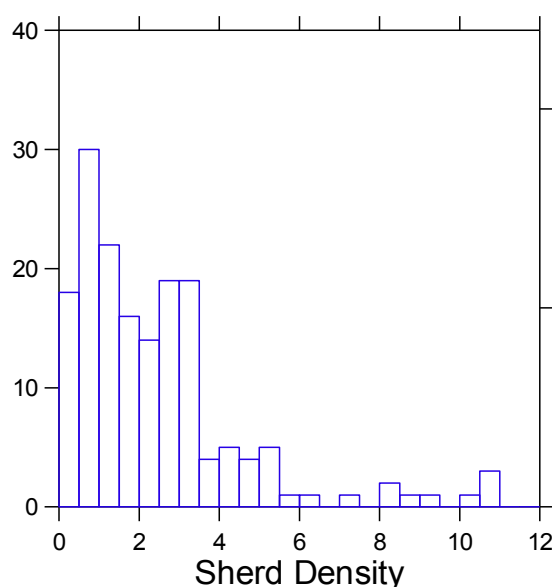
## Systematic Collections

Altogether 167 systematic collections were made in the Upper Daling regional survey (5.8% of the collections made). The frequency distribution of surface sherd densities is illustrated below. These are counts of sherds per square meter from systematic collection circles, excluding only modern (post-Liao) sherds.

Minimum : 0.100  
 Lower Hinge : 0.900  
 Median : 1.900  
 Upper Hinge : 3.050  
 Maximum : 10.900

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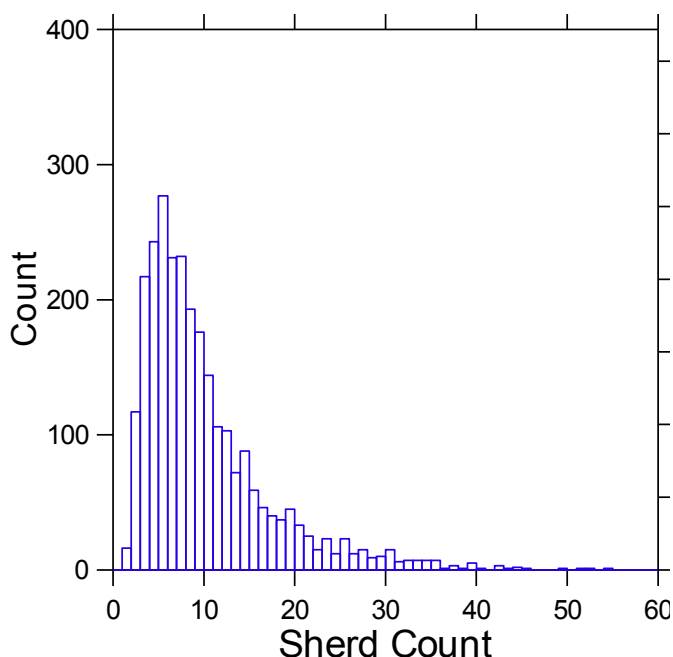
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0 H 55556666667777778888889999999
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2  00112223333334
2  555556677778889999
3 H 0000001111122233344
3  5699
4  00234
4  6666
5  01222
5  8
6  1
6
7  2
7
8  11
8  8
9  0
10 1
10 689
  
```



The theoretical minimum density for a systematic surface collection is 0.5 sherds/m<sup>2</sup> since if sherds are estimated to be sparser than this, then a general collection is made. The stem-and-leaf plot confirms that this subjective judgment made in the field was fairly effective. A total of 18 (of the 167) systematic collections yielded densities lower than 0.5 sherds/m<sup>2</sup>, and fully half of these had densities of 0.4 sherds/m<sup>2</sup>. These values lower than the theoretical minimum are attributable to three causes. First, modern sherds were excluded from the counts once sherds were washed and classified, so total density values decreased somewhat from their immediate appearance in the field. Second, some systematic collections were made in areas of occupation where many collection units had high densities and it simply wasn't noticed before collecting that one or more collection units had lower densities. And third, sometimes the subjective estimates of sherd density made by survey crews in deciding to make systematic or general collections were inaccurate. As might well be expected of a variable like this, the frequency distribution straggles off toward high values, but there are no outliers so severe as to call for corrective action before analysis.

## General Collections

When a general collection is made, the theoretical maximum is 25 sherds, since collecting is supposed to stop at that number. The frequency distribution of these counts is as follows:



Altogether 2,690 general collections were made in the Upper Daling regional survey (94.2% of the collections made). Of these, 117 have more than 25 sherds. This clearly happens because the count is only approximate and sometimes, especially when several people are collecting simultaneously, the target number is overshoot before anyone quite realizes it. This can also happen when a small hot spot of high density is encountered. Altogether, 56 collections have more than 30 sherds, and 22 have more than 35 sherds. The largest general collection has 54 sherds. At the low end of the distribution, 16 collections have only 1 sherd (theoretically impossible since the minimum for a collection is 2 sherds, but sometimes one turns out to be a rock or only 1 sherd can be found in association with a feature). An additional 117 collections have only 2 sherds, and another 217 collections have only 3 sherds.

Sometimes general collections were undoubtedly made when systematic collections would have been warranted, just because the high density wasn't recognized quickly enough. These are presumably general collections with large numbers of sherds, but their densities probably do not ever exceed 0.5 sherds/m<sup>2</sup> by very much. The vast majority of general collections clearly have densities considerably below 0.5 sherds/m<sup>2</sup>. If approximately the target number of 25 sherds were collected, the surface density was probably approximately 0.5 sherds/m<sup>2</sup>. If fewer sherds were collected, it means they were difficult to find because densities were below 0.5 sherds/m<sup>2</sup>. If very few sherds were collected, it means they were even harder to find because densities were substantially below 0.5 sherds/m<sup>2</sup>. The conversion table below has been used for establishing numeric sherd density values for general collections, depending on the numbers of sherds collected.

fewer than 5 sherds	=	0.05 sherds/m <sup>2</sup>
5–9 sherds	=	0.10 sherds/m <sup>2</sup>
10–19 sherds	=	0.30 sherds/m <sup>2</sup>
20 sherds or more	=	0.50 sherds/m <sup>2</sup>

By comparison, in the Chifeng regional survey, 3,278 collections were made, of which 294 (9%) were systematic and 2,984 (91%) were general. Gross densities over 12.88 sherds/m<sup>2</sup> were considered outliers, and explanations for their unusualness were usually found. No Upper Daling density values were this high, and none were excluded as outliers. The median density for systematic collections in Chifeng was 3.1 sherds/m<sup>2</sup> (compared to 2.3 sherds/m<sup>2</sup> for the Upper Daling region). The conversion scale for number of sherds in a general collection to density in sherds/m<sup>2</sup> for Chifeng was quite similar to the one proposed here—shifted just slightly higher. This seems reasonable, since, at the higher end of the scale, fewer Upper Daling general collections seem to have ranged up into the densities above 0.5 sherds/m<sup>2</sup> that should cause a systematic collection to be made. At the lower end of the scale, a lower density is used for very small Upper Daling collections, since the higher resolution of the Upper Daling survey (0.25 ha collection units, compared to 1.0 ha collection units) and the lower threshold for declaring a collection unit (two sherds instead of three) would mean greater recovery of very low density occupation areas than in Chifeng.