

SHOOFLY CHAPTER
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A Morphological Study
of
The Projectile Points from
the
Shoofly Village Ruins

Submitted by

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Shoofly Village is a prehistoric site which was occupied during the 12th century A.D. It is located south of the Mogollon Rim, near the modern town of Payson. The Shoofly ruins consist of a central core of contiguous rooms - some of which were 2 stories high. Around the core are groups of less well built homes and ca. 10 curvilinear structures; "What we see here are two, perhaps, three community designs combined in a single settlement", perhaps this represents socially and culturally distinct groups of people living together at this one site (Dr. Redman). The entire village was then surrounded by a compound wall which has since fallen. The inhabitants of the

site were farmers and hunters. Their hunting quarry consisted of deer, rabbit, rodents, and fowl.

The projectile points utilized to hunt these animals were fairly small and triangular. They were generally made of chert, basalt, and obsidian.

This study is based on projectile points retrieved from the 1984, 1985, and the first 2 weeks of the 1986 field seasons. From a total of 186 points I selected 118 of what I considered to be the best examples of the morphological types which I have distinguished (fig. no. 1). The purpose of the study was to determine if any patterns exist between the morphological types and their general location, level, and provenience densities -

such patterns may reflect important cultural and social characteristics. I also performed a separate examination of obsidian points - due to the rare and distinctive nature of the material.

I have divided the Shooply projectile points into morphological categories:

- Type 1 is triangular with straight edges, the base is concave. This form can vary in its maximum height, maximum width, and the degree of curve of the concave base. In many examples the base corners are quite elongated (fig. no. 1, 1a).
- Type 2 is triangular with straight sides and a generally flat base. This form has variations in the maximum height and the maximum width. Type 2 is problematic since some of the bases appear to have been intentionally made flat by pressure flaking, while others are clearly broken - as if snapped off of a larger point (perhaps from a morphologically different point!).
- Type 3 is triangular with notched sides - one notch per side, both of which are at the same level. The base

is concave to varying degrees. This form also has variations in the maximum height and the maximum width.

- Type 4 consists of the relatively large points with a distinct stemmed base. This type varies in maximum height and maximum width as well as the general shape of the body and the stem.
- Type 5 is similar to type 3, it is basically triangular with a notch on each side. The major difference is that the base portion is squared - rather than continuing in a straight line from the point to the base as in type 3.

One thing which should always be considered in a study of this nature is the size of the sample: type 1 = 25 examples, type 2 = 30, type 3 = 44, type 4 = 14, and type 5 = 5. As the reader can see, types 4 & 5 are rather poorly represented therefore conclusions based on these forms must be accepted with caution.

This project began with an analysis of the locations of the 5 types. Figure no. 2 demonstrates that none of the types concentrate heavily in any particular provenience. In fact most proveniences produced only 1 or 2 examples of a specific type.

The highest concentration seems to have been type 3 in areas $134/114 = 6$ examples and $129/174 = 5$ examples - although I hesitate to call 5 or 6 examples of something a significant ^{concentration}. From this datum, it would appear that the production or use of specific types was not confined to certain proveniences - but the reader must also remember that some areas have been excavated more than others - which may produce a distorted picture of the situation. Since this

analysis did not yield any major patterns, I broadened the study to ascertain whether there was any core to periphery concentration pattern (fig. no. 3). As for all projectile points - irregardless of specific morphological types - there appears to have been a greater concentration of point production, usage, or disposal in the periphery zone - core:periphery = 29:90 - although one should keep in mind that the periphery encompasses a larger geographical area than the core. However, despite such a discrepancy this ratio does seem to represent some sort of cultural pattern. Could the projectile points in the periphery have been used to defend the site from human or animal intruders? Perhaps the village workshops

were located here.
I suppose that the periphery could also have
been the village's disposal area - the points found
there being part of the inhabitants' "trash". The
core vs. periphery examination was adjusted to focus
on specific morphological types (figs. nos. 2 & 3).

Types 2 through 5 represent the greatest differences
in core to periphery ratios. Type 1 may have been
an "all-purpose" point, used by all villagers (this
might explain its more even distribution between core
and periphery). The distribution data were also
examined in order to ascertain the degree to which
the different morphological types appeared together in
the various proveniences (figs. nos. 4 & 8). Of the 31
proveniences considered, 6 contained 4 to 6 of the

types - 3 areas in the core and 3 areas in the periphery. Obviously the various morphological types were not usually made, used, or stored in the same proveniences - but when they were, the areas seem to have been evenly distributed between the core and the periphery. 20 proveniences produced only 1 to 2 types each. Does this mean that those who lived in these areas made or used only a limited number of point types? Once again, these figures may be bias since the proveniences that yielded 4 to 6 types also generally produced the greatest number of points on the site (fig. no. 5) - whether this is due to a naturally higher point concentration or

greater excavation activity I cannot say.

This projectile point study also included an examination of the morphological types according to levels. A very interesting pattern arose in which points of all types were most highly concentrated in levels 1 & 2 (level 2 actually generated more points than level 1, fig. no. 6). Most types were found through at least level 4, but the data may still be distorted due to more extensive excavation of the upper levels as well as the varying size / depth of the upper vs. the lower levels. Despite these problems the data do appear to reflect a general increase in all morphological types in the upper levels. Was

there a population increase at this time requiring more hunting? Jane Bradley has suggested that these levels reflect a significant disposal of projectile points (perhaps as the "trash" of later villagers). Jane also brought to my attention the great discrepancy between the surface to subsurface densities of projectile points (fig. no. 6). Is this further evidence of post-hunting at Sheepley? Perhaps the difference also reflects a drastic decrease in the population during the latter years of the sites' occupation.

The obsidian points showed similar results with regards to their proveniences and their levels (fig. 7); for example, most of the

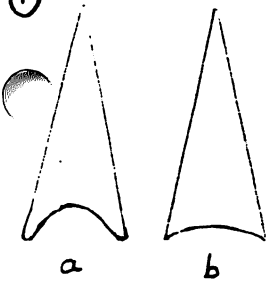
points came from the periphery - core: periphery
= 1:11. If the sample is representative, then
obsidian point production / use was concentrated
in the periphery. These points also seem to
be concentrated in levels 1 & 2. It is interesting
to note that the points of this material (whose
closest source is a ca. 4 day walk from the
site) follow the same location / level patterns
as the points made of local materials. Its
presence was geographically widespread at Swoofly
(at least in the periphery - fig. nos. 7+8) perhaps
indicating that obsidian was available to all the
inhabitants. Another interesting feature is that
7 of the 12 examples are type 3 - a form that

appears to be a bit more elaborate than some of the others; perhaps obsidian was employed just for the elaborate types because it was a valued material. The scarcity of obsidian in this region appears to be confirmed by the fact that none of the large, type 4 examples were made of it.

Although this study did reveal some interesting patterns, I feel that the results must be supplemented by further excavational data and more in depth statistical analyses.

Morphological Types

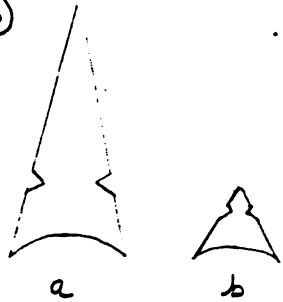
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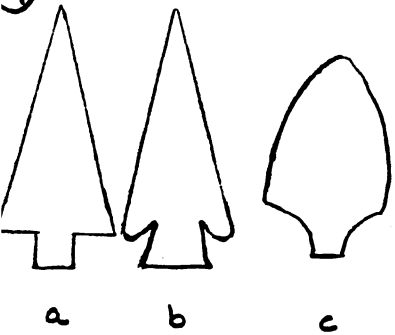
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③



④



⑤

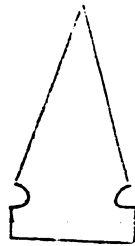


fig. no. 1 * Projectile Points not drawn to Scale

periphery
C = core

Morphological type 1

Number of points

Location (E/N)

Morphological type 2

Morphological type 3

Morphological type 4

Morphological type 5

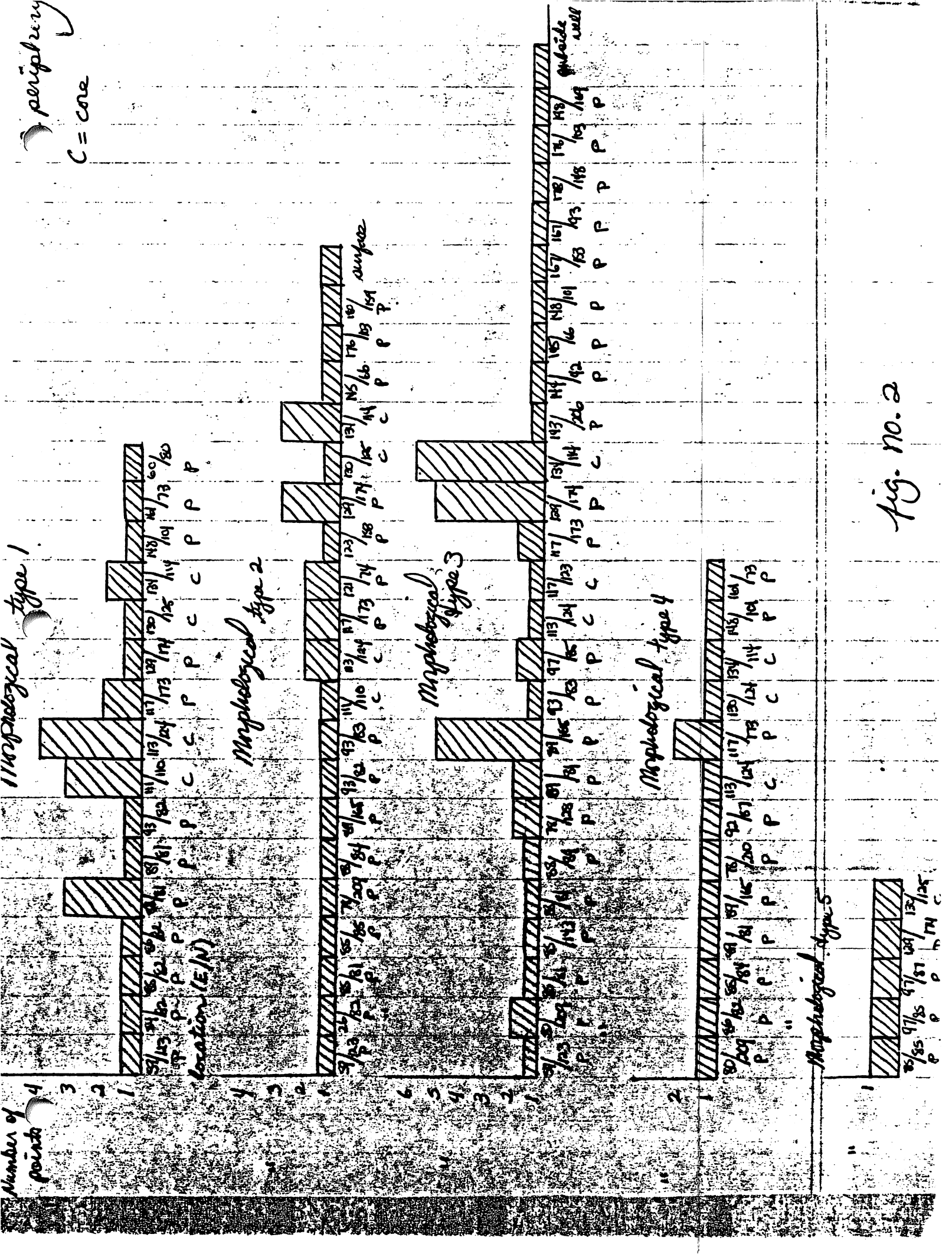


fig. no. 2

core: periphery (all morphological types)
29: 90

core: periphery (according to specific types)

1 = 10:15

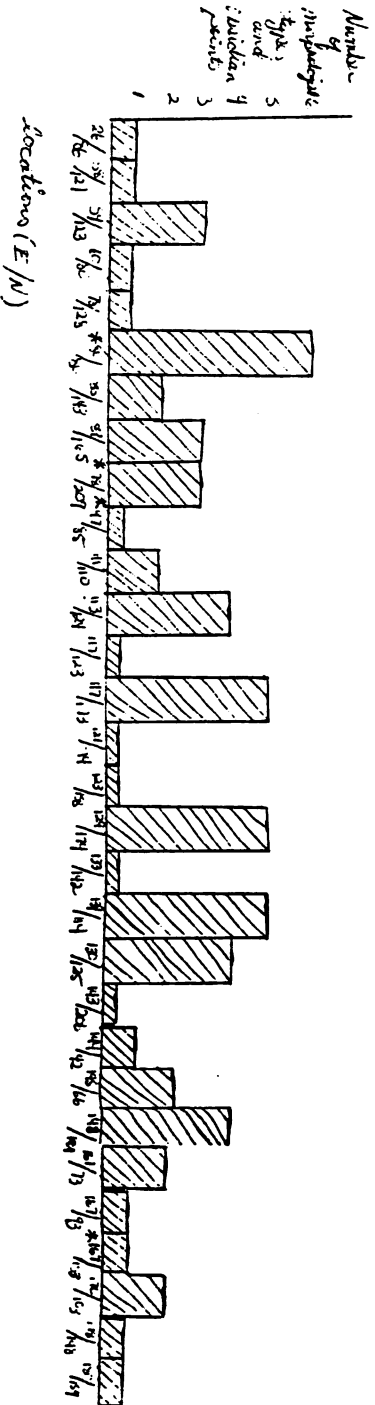
2 = 7: 24

3 = 8: 36

4 = 3: 11

5 = 1:4

fig. no. 3



* Location numbers also stand for neighbor provisions

Fig 4

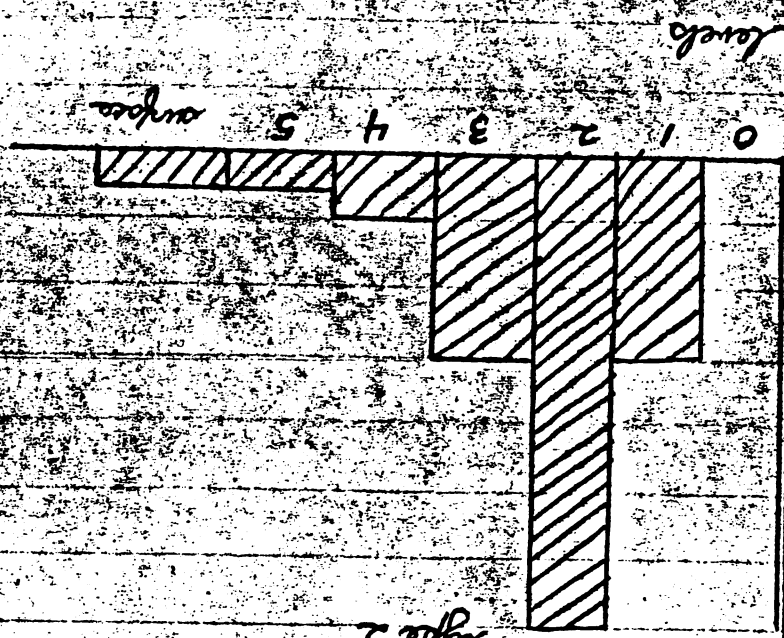
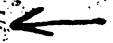
Fig. no. 5

$P = \text{porphyry}$
 $C = \text{core}$

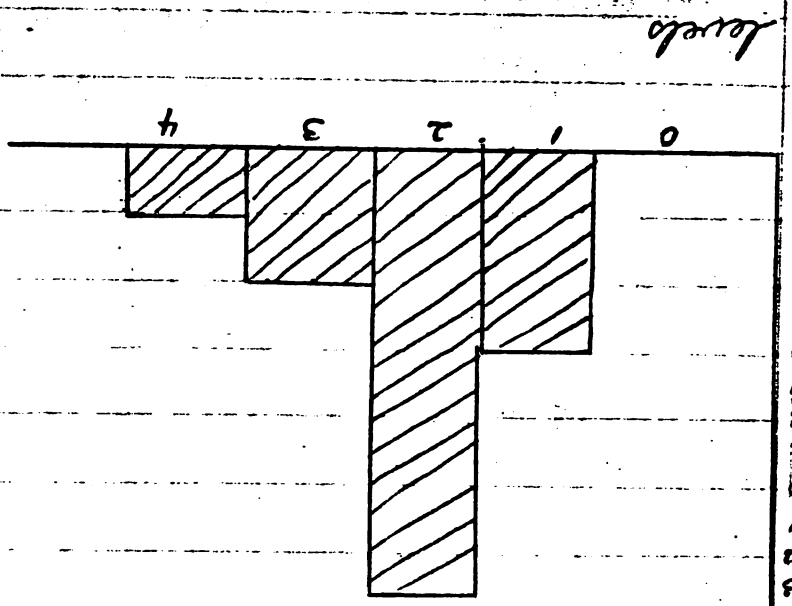
$P 129/174 = 10$
 $C 134/114 = 12$
 $C 113/124 = 8$
 $P 117/173 = 8$

3/N = number of points returned (independent of type)
magnetic

fig. no. 6



Morphological Type 2



Morphological Type 1

total number of points

total number of points

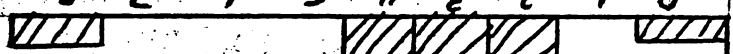
fig. no 6 cont.

0 1 2 3 4



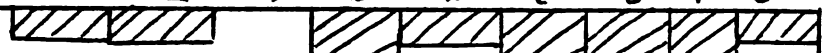
Morphological Type 5

0 1 2 3 4 5 6 7 8



Morphological Type 4

0 1 2 3 4 5 6 7



Morphological Type 3

total number of units

total number of units

total number of units

Obsidian

core : p

1 : 11

type = density

1 = 0

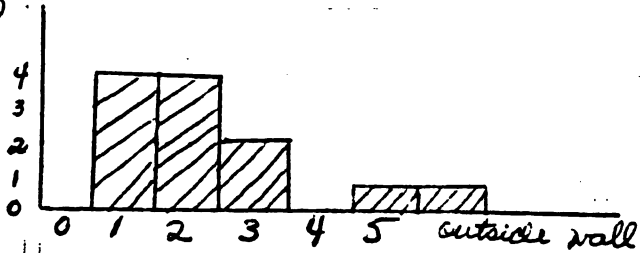
2 = 3

3 = 8

4 = 0

5 = 1

number of points



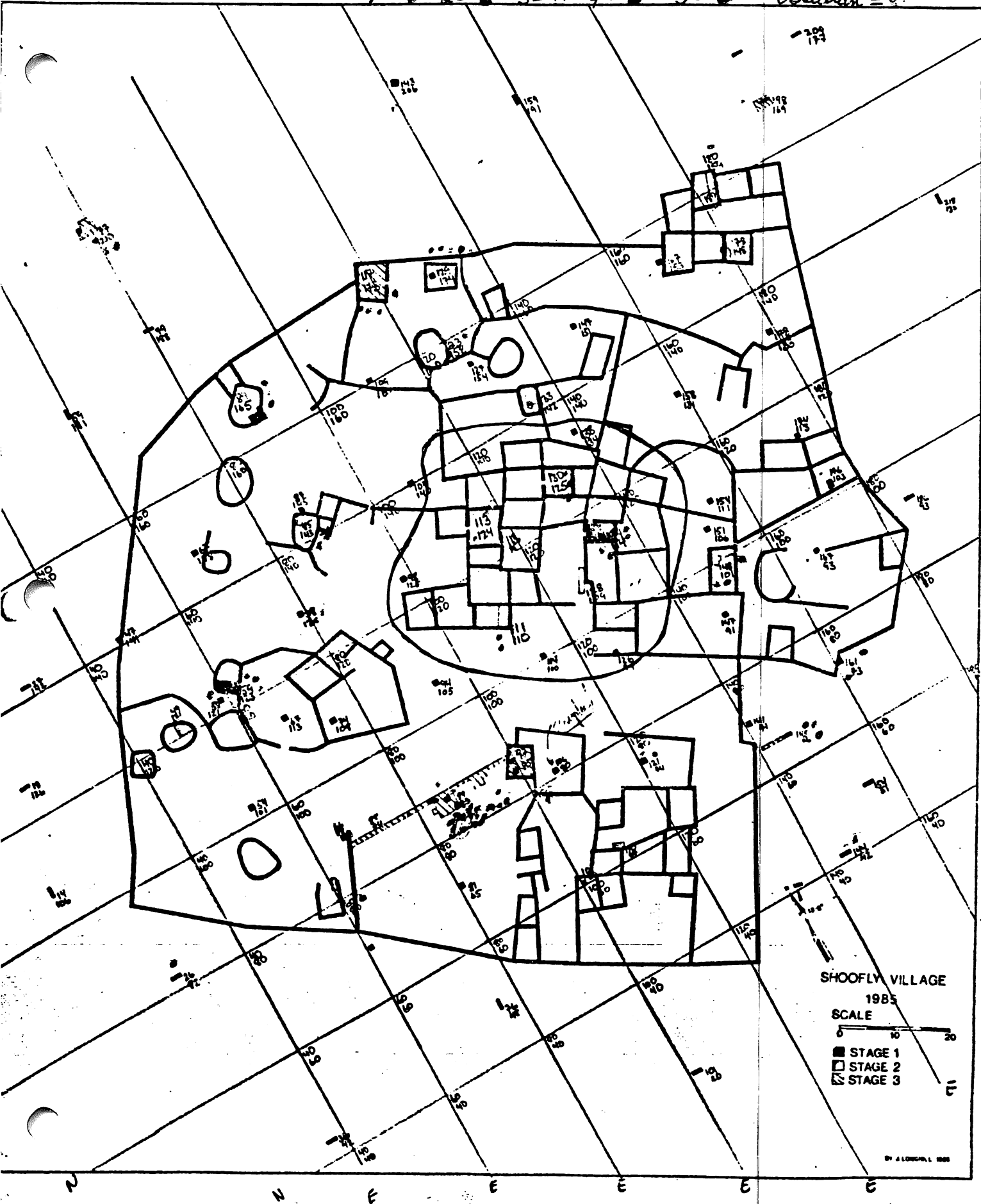
levels

fig. no. 7

Black line denotes
core area

- type = color

1 = ● 2 = ● 3 = ● 4 = ● 5 = ● Obsidian = ●



SHOOFLY VILLAGE

1985

SCALE

- STAGE 1
- ▨ STAGE 2
- ▩ STAGE 3

BY J. LONGWELL 1985

fig. no. 8

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