EXCAVATION RESULTS

In reporting the results of the Pollack Site excavations we have separated the presentation of the unanalyzed excavation results from our interpretations of these data. Although it is virtually impossible to provide an unbiased presentation of the data without some form of interpretation, we do feel that a presentation of the raw data is important. The following section of this report describes those raw data for all site areas. The interpretations of the data will be presented separately for each area.

Site Stratigraphy

With few exceptions, the stratigraphy of the Pollack Site was similar in all site areas noted in Figure 13. Figure 35 shows a typical profile from the site. With the exception of the wooded section of the site along the Leipsic River, all areas of the site had been plowed. The resulting plow zone of disturbed soils ranged in thickness between 20 and 70 centimeters. Extensive erosion accompanied the plowing of the site over the past 200 years, and the plow zone was thinnest in the most highly eroded areas, Areas E, F, and G (Figure 13). In most areas of the site the plow zone had a sandy texture, but in the eroded portions the texture of the sands was coarser, and gravels and cobbles were present as well.

The gravels and cobbles were derived from the underlying Columbia Formation (Figure 35), which was located directly beneath the plow zone in most areas of the site. The Columbia Formation is of Pleistocene age, 15,000 - 2 million years old, and consists of very coarse sands and gravels (Jordan 1964). There is no chance for buried artifact-bearing soils within the Columbia Formation due to its great age; therefore, in most areas of the site artifacts were confined to the plow zone, or to pit features that had been excavated into the Columbia Formation at a later time. When these pit features occurred, they were visible as stains at the plow zone/ Columbia Formation interface (Plates 11 and 12).

At the edges of the cultivated fields bordering the wooded area on the shore of the Leipsic and lower reaches of Alston Branch in Areas B and C, a slightly different profile was observed (Figure 36). In these areas a buried soil, less than 10 centimeters thick, was identified between the bottom of the plow zone and the top of the Columbia Formation. The soil invariably had a silty texture and ranged in color from yellow to orange to brown. The buried soil horizon beneath the plow zone was not located in an area of active flooding. This fact and its silty texture suggest that it had an aeolian origin. Similar soils of aeolian origin have been encountered in other parts of the Delmarva Peninsula (e.g., Foss et al. 1978).

FIGURE 35

Typical Profile of the Pollack Site

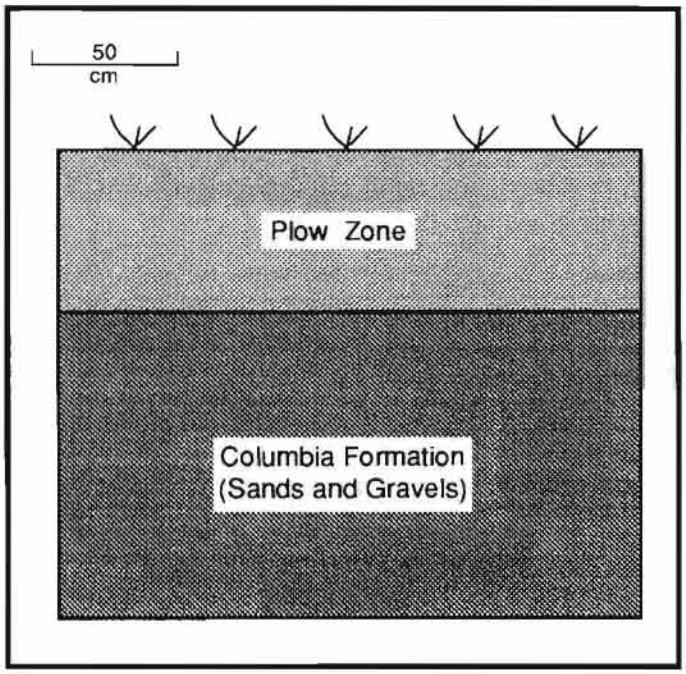
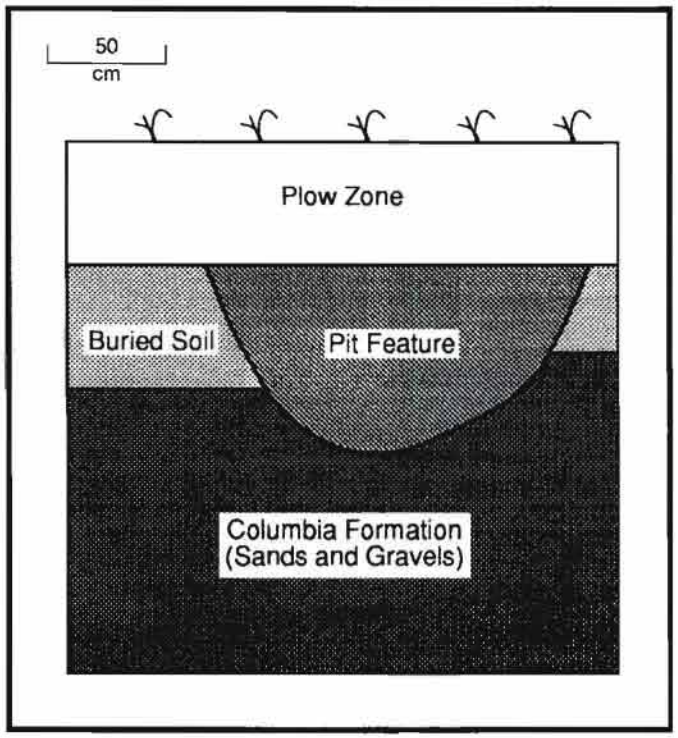


FIGURE 36

Profile of Relationship of Features and Buried Soils, Areas B and C



It is difficult to precisely establish the age of the buried soil because it survives only as a thin remnant directly beneath the disturbed plow zone soils. Although artifacts were found in this soil, they could have originated in the plow zone and then moved downward into this soil through natural processes. The soil's stratigraphic position above the Columbia Formation does indicate that its deposition occurred no earlier than the end of the Pleistocene. It is important to note that all of the pit features identified at the site originated at the top of the surface of the buried soil, not within it. None of the features in the cultivated field predate the beginning of the Woodland I Period; therefore, it is reasonable to assume that the buried soil was deposited prior to the beginning of the Woodland I Period (ca. 3000 B.C.) and after the end of the Pleistocene (ca. 15,000 B.C.). The buried soil was excavated wherever it was encountered and the results of these excavations are described later in this report.

FIGURE 37

Development of the Pollack Site Profile

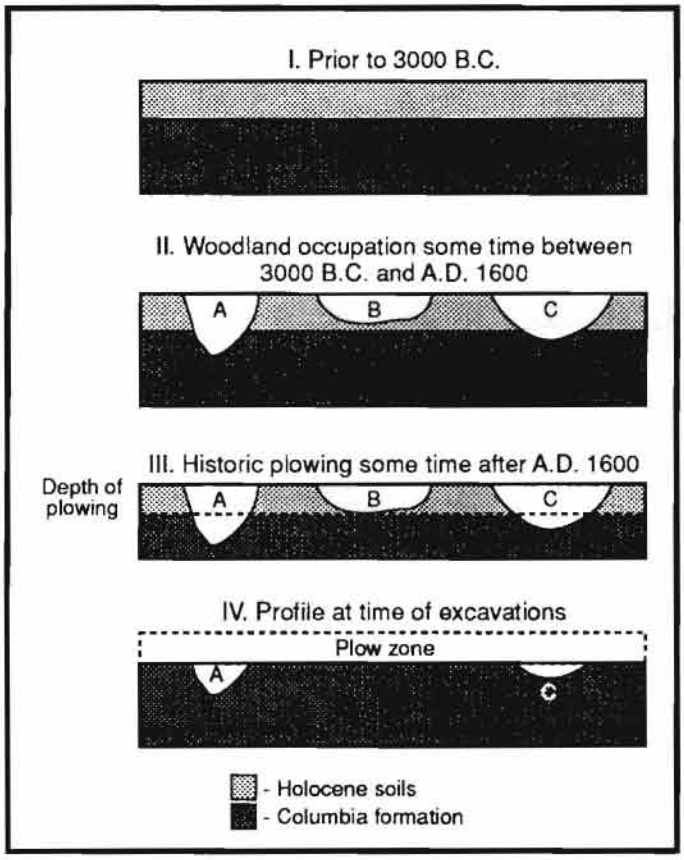


FIGURE 38

Typical Profile from Wooded Area

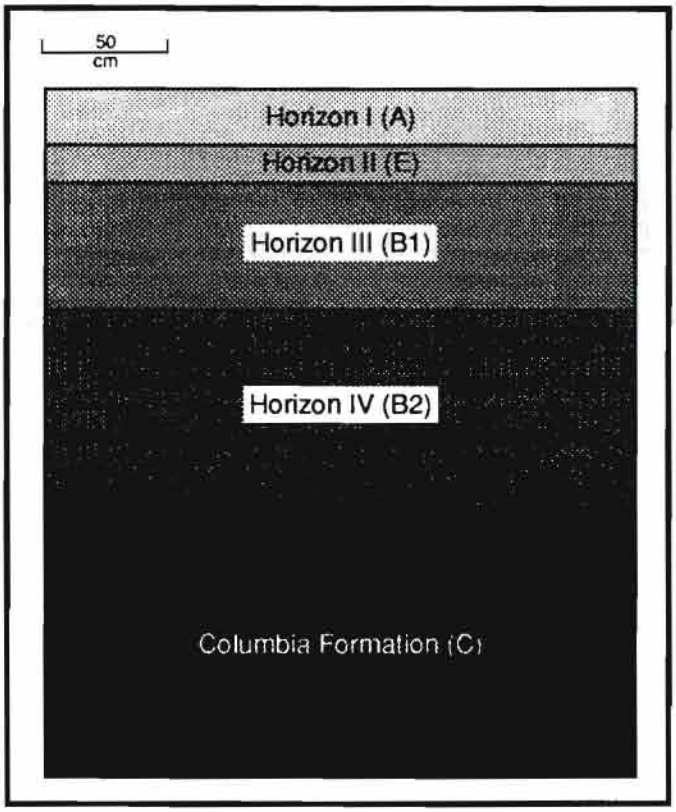


Figure 37 summarizes the natural depositional and cultural processes which affected the site's stratigraphy over time. It is important to note that plowing of the site, along with subsequent erosion, truncated all of the features in the cultivated field (Figure 37 - Part III). It is very likely that shallow features were also completely obliterated by this process.

Figure 38 shows a typical profile of the wooded area of the Pollack Site. This area showed no signs of disturbance of the profile by plowing, and the profile shown in Figure 38 probably characterized the entire site area prior to A.D. 1600. Horizon I is a shallow surface soil (A horizon), usually less than 15 centimeters thick, that had a silty texture and was dark brown in color. Horizon II is even thinner and is a light tan to gray silty sand (E horizon). Horizon III is somewhat thicker than the overlying horizons and is a weakly developed B horizon (B1) with a silty texture. It ranged in color from light brown to brownish orange. Horizon III is a better developed B horizon (B2) that has a slightly clayey texture within the silt matrix due its more extensive development. Its color ranged from brownish orange to yellow-orange. Horizon III was underlain by the same Columbia Formation soils that had been identified in the adjacent cultivated fields.

The degree of development of the profile shown in Figure 38 suggests that the soils were intact for at least 5000 years. Some features were encountered within the woods, but most of these originated close to the surface within Horizon III. No features originated in Horizon IV. The silty texture of the soils, their location in an area not prone to alluvial flooding, and their thickness suggest that they had an aeolian origin, as did the buried soil in the cultivated field.

TABLE 4

General Artifact Totals for All Site Areas

ARTIFACTS	FEATURES	PLOW ZONE	SUBSOIL TEST UNITS - CULTIVATED FIELD	TEST UNITS - UNPLOWED WOODLOT	TOTAL
Lithic artifacts	4421	5276	2052	1109	12,858
Fire-cracked rock	673	357	80	157	1267
Ceramic sherds	328	80	17	55	480
Ground stone tools & miscellaneous tools	20	13	2	7	42
TOTAL	5442	5726	2151	1328	14,647

TABLE 5

Artifact Counts and Densities by Site Area

	AREAS							
ARTIFACT COUNTS	A	B	C	D	E	F	G	WOODS
Features	796	1778	1715	80	90	139	70	670
Plow Zone Test Units	580	1508	3476	72	194	0	0	0
Subsoil Test Units	0	418	1730	0	0	0	0	0
Wood Units	0	0	0	0	0	0	0	1328
# of Features	105	217	445	34	23	20	13	2
# of Test Units	205	211	346	54	36	18	113	95
Artifacts per Feature	8	8	4	2	4	7	5	335
Artifacts per Test Unit	3	9	15	1	5	0	0	14

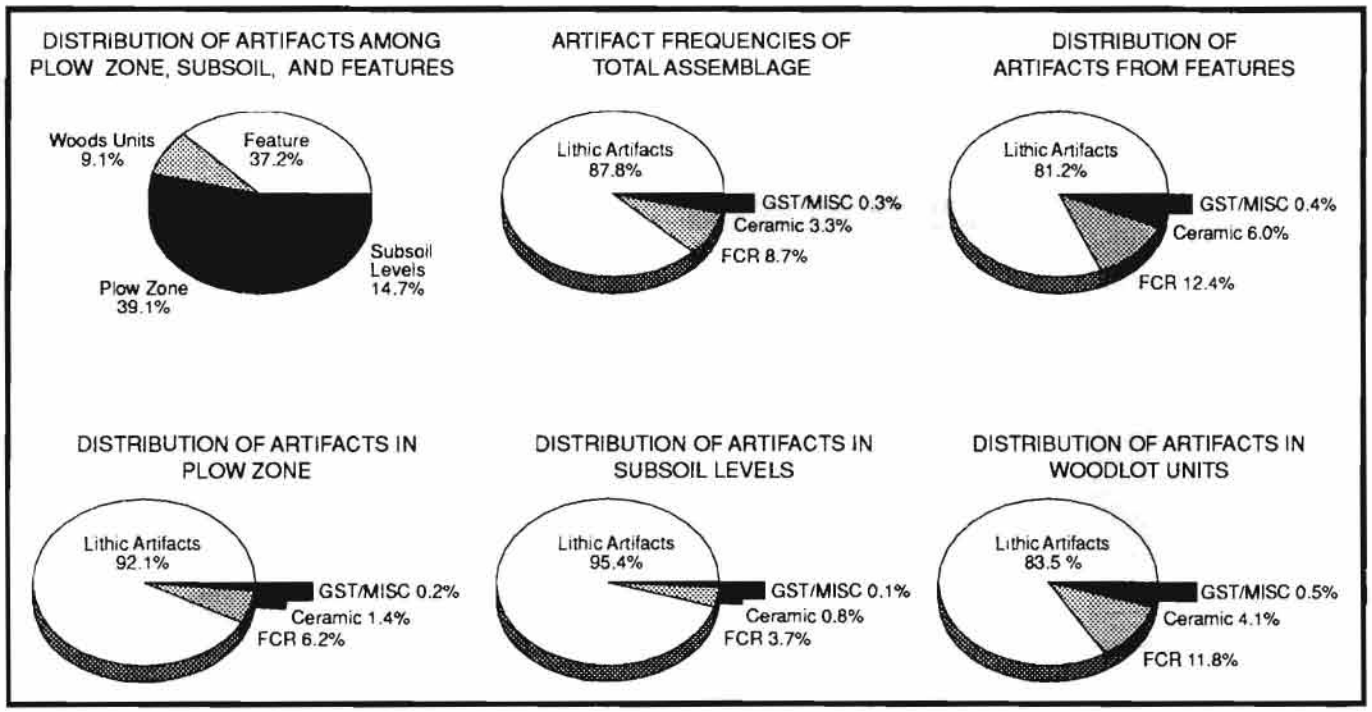
In sum, the stratigraphy of the Pollack Site had been extensively disturbed by cultivation in almost all areas. This disturbance created a situation where prehistoric artifacts were either in disturbed plow zone contexts, or within prehistoric pit features. Some intact soils with artifacts were preserved in and adjacent to the wooded portions of the site, however, and in these locations, artifacts could be recovered from relatively undisturbed stratigraphic contexts.

Excavated Artifacts

The complete catalog of all artifacts recovered from excavations of all areas of the Pollack Site is on file at the University of Delaware Center for Archaeological Research. Artifacts were recovered from four major contexts: features, test units excavated in disturbed plow zone soils, test units excavated in undisturbed soils beneath the plow zone in the cultivated fields, and test units excavated in unplowed soils in the woodlot. Table 4 provides a summary of the artifact counts for these varied contexts in all site areas combined. Figure 39 provides a graphic summary of the data in Table 4 and it can be seen that features and plow zone soils of the site as a whole produced relatively equal amounts of artifacts. The charts in Figure 39 also show that lithic artifacts comprised the overwhelming majority of the total artifact assemblage, no matter from where the artifacts were derived.

FIGURE 39

Artifact Percentages for All Areas Combined



Given the fact that more than 1000 one-meter test units and more than 850 features were excavated, the artifact yield was rather low. For the combined site data, the average number of artifacts per feature is approximately six and the average number of artifacts per test unit is approximately nine. Data on artifact densities among features and test units from individual site areas are shown in Table 5. The artifact densities vary by area and by context. Interpretations of this variation will be discussed later in this report.

More detailed summary catalogs of general artifact classes for each area of the site are shown in Tables 6 - 8. Table 6 covers artifacts from test units, regardless of whether they are from disturbed plow zone units or undisturbed units, Table 7 covers artifacts from features, and Table 8 includes all excavated artifacts. Figures 40 - 47 show graphic summaries of the data in Tables 6 - 8 for all site areas. These figures all show that lithic artifacts, primarily debitage comprise the vast majority of the artifact assemblage. And, as noted above, this debitage is distributed over a large number of features and excavation units with few artifacts in each provenience unit. Consequently, some forms of artifact analysis and interpretation will be difficult to accomplish.

FIGURE 40

Artifact Percentages - Area A

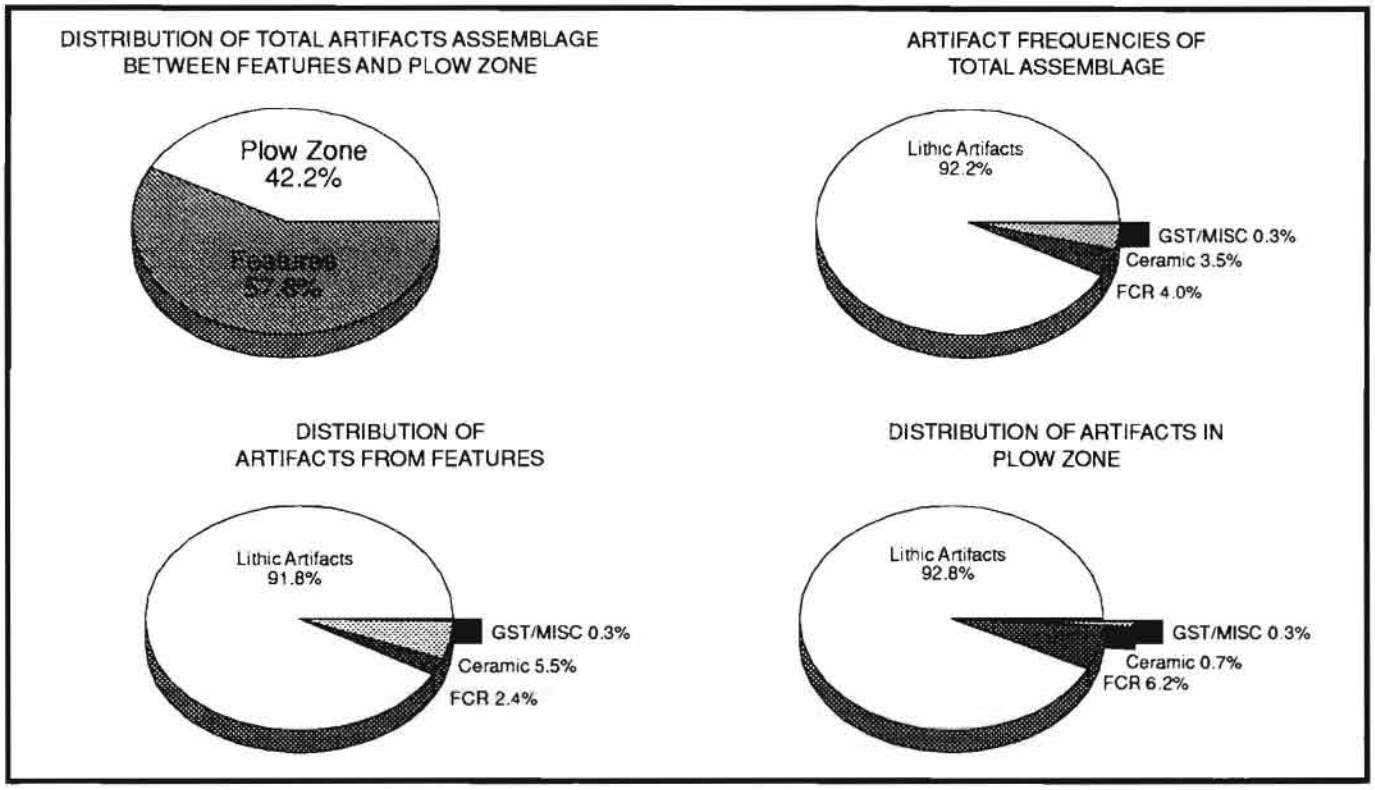


TABLE 6

Summary Catalog of Excavated Artifacts by Site Area - Artifacts from Test Units

	AREAS							
ARTIFACT TYPES	A	B	C	D	E	F*	G*	Woods
FLAKES	407	1496	4085	47	88	0	0	853
UTILIZED FLAKES	13	61	95	4	1	0	0	25
FLAKE TOOLS	35	54	64	2	0	0	0	12
PROJECTILE POINTS	7	19	42	2	1	0	0	14
BIFACES	4	16	46	1	1	0	0	16
MISC. STONE TOOLS	2	2	12	1	0	0	0	2
SHATTER	65	131	502	4	15	0	0	173
CORES	5	10	14	0	1	0	0	11
GROUND STONE TOOLS	2	4	8	1	1	0	0	7
CERAMIC SHERDS	4	21	72	0	0	0	0	55
FIRE-CRACKED ROCK COUNT	36	112	270	13	86	0	0	157
FIRE-CRACKED ROCK WEIGHT (grams)	3169	6210	19,213	405	8257	0	0	7716

* No test units excavated in this area

FIGURE 41

Artifact Percentages - Area B

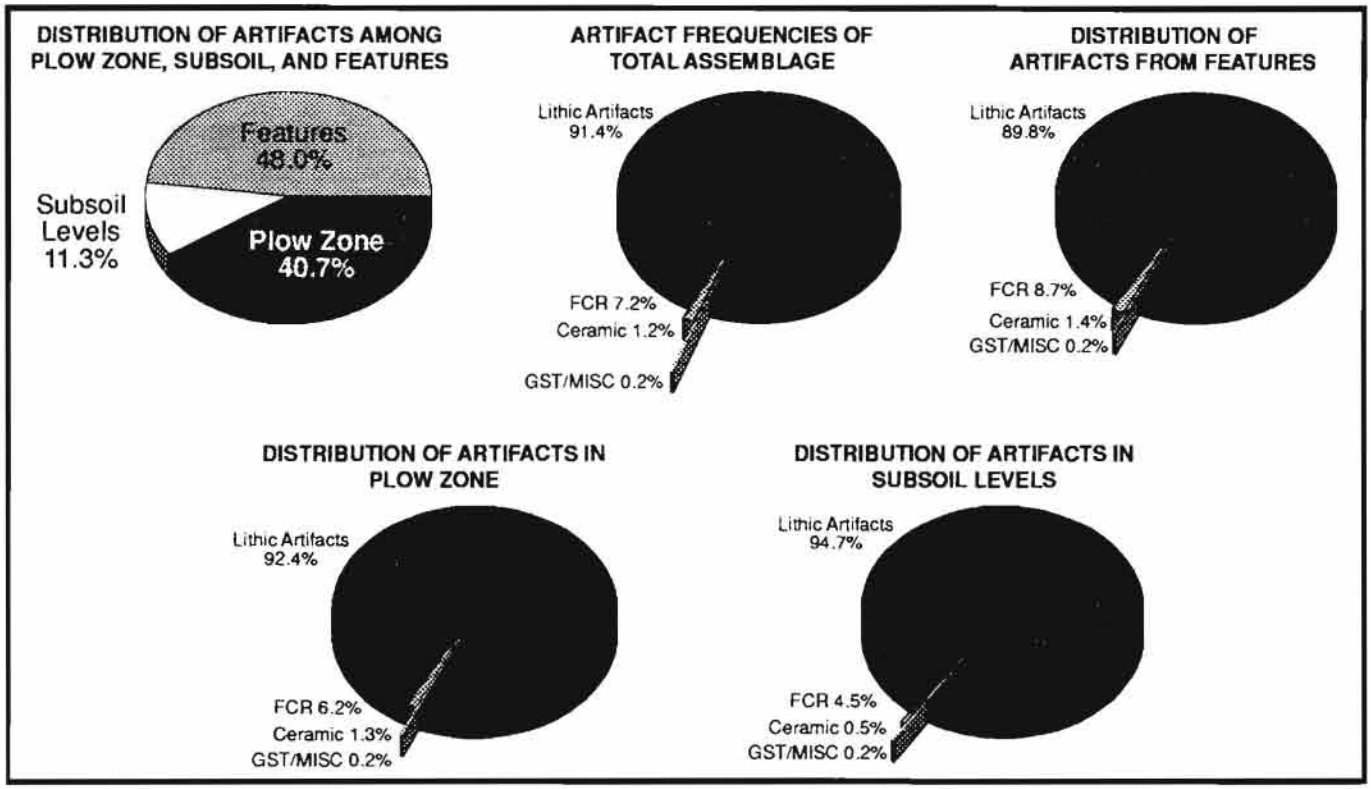


TABLE 7

Summary Catalog of Excavated Artifacts by Site Area - Artifacts from Features

	AREAS							
ARTIFACT TYPES	A	B	C	D	E	F	G	Woods
FLAKES	632	1429	1037	34	76	43	14	524
UTILIZED FLAKES	17	16	16	1	0	1	0	8
FLAKE TOOLS	28	41	11	0	1	0	0	6
PROJECTILE POINTS	3	16	12	0	0	0	0	7
BIFACES	5	18	8	0	0	0	0	7
MISC. STONE TOOLS	2	5	3	0	0	0	0	2
SHATTER	4	67	128	25	7	26	17	38
CORES	3	4	13	0	0	0	0	6
GROUND STONE TOOLS	2	3	7	2	0	1	1	3
CERAMIC SHERDS	44	25	259	0	0	0	0	0
FIRE-CRACKED ROCK COUNT	19	154	221	18	6	68	38	69
FIRE-CRACKED ROCK WEIGHT (grams)	1092	23,098	26,271	2747	562	4034	1280	5582

FIGURE 42

Artifact Percentages - Area C

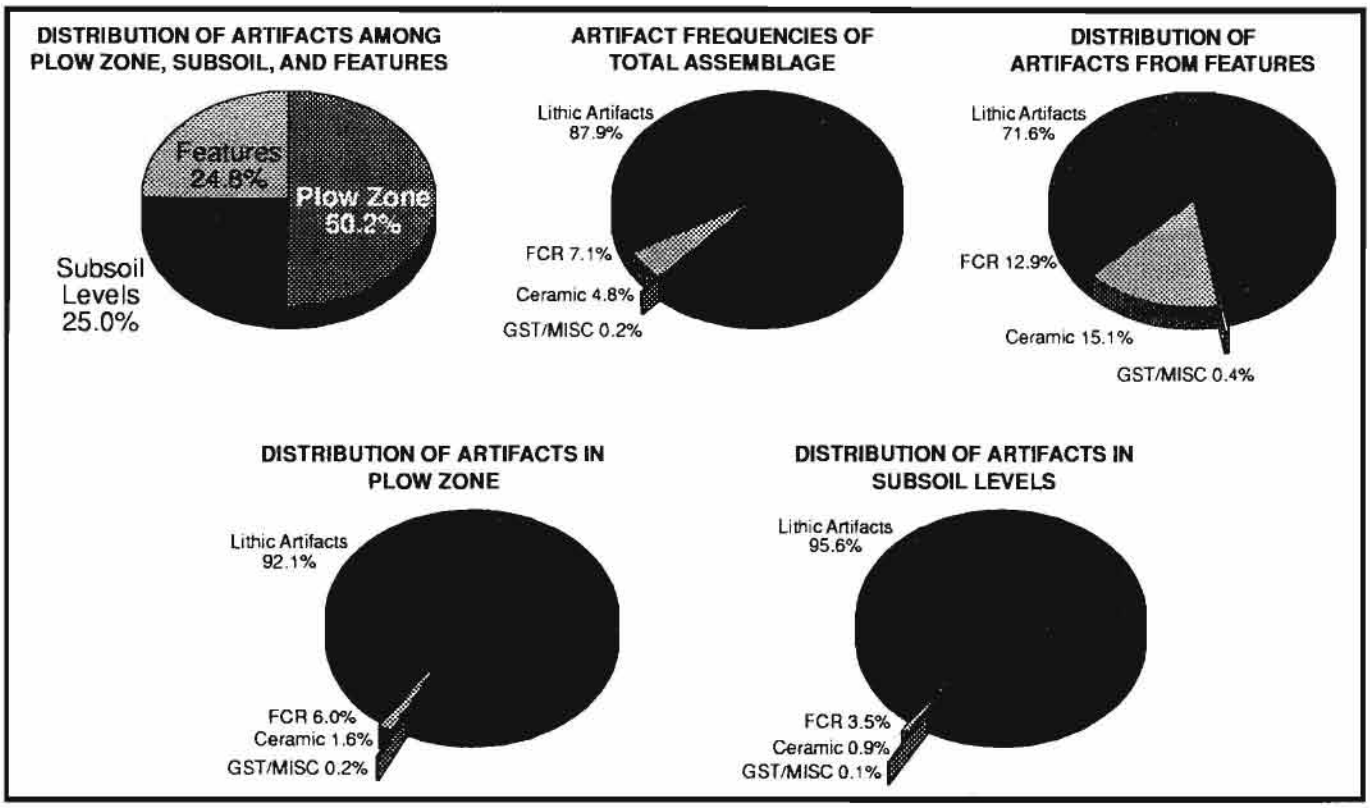


TABLE 8

Summary Catalog of Excavated Artifacts by Site Area - Total Artifacts

	AREAS							
ARTIFACT TYPES	A	B	C	D	E	F	G	Woods
FLAKES	1039	2925	5122	81	164	43	14	1377
UTILIZED FLAKES	30	77	111	5	1	1	0	33
FLAKE TOOLS	63	95	75	2	1	0	0	18
PROJECTILE POINTS	10	35	54	2	1	0	0	21
BIFACES	9	34	54	1	1	0	0	23
MISC. STONE TOOLS	4	7	15	1	0	0	0	4
SHATTER	106	198	630	29	22	26	17	211
CORES	8	14	27	0	1	0	0	17
GROUND STONE TOOLS	4	7	15	3	1	1	1	10
CERAMIC SHERDS	48	46	331	0	0	0	0	55
FIRE-CRACKED ROCK COUNT	55	266	491	31	92	68	38	226
FIRE-CRACKED ROCK WEIGHT (grams)	4261	29,308	45,484	3152	8819	4034	1280	13,298

FIGURE 43

Artifact Percentages - Area D

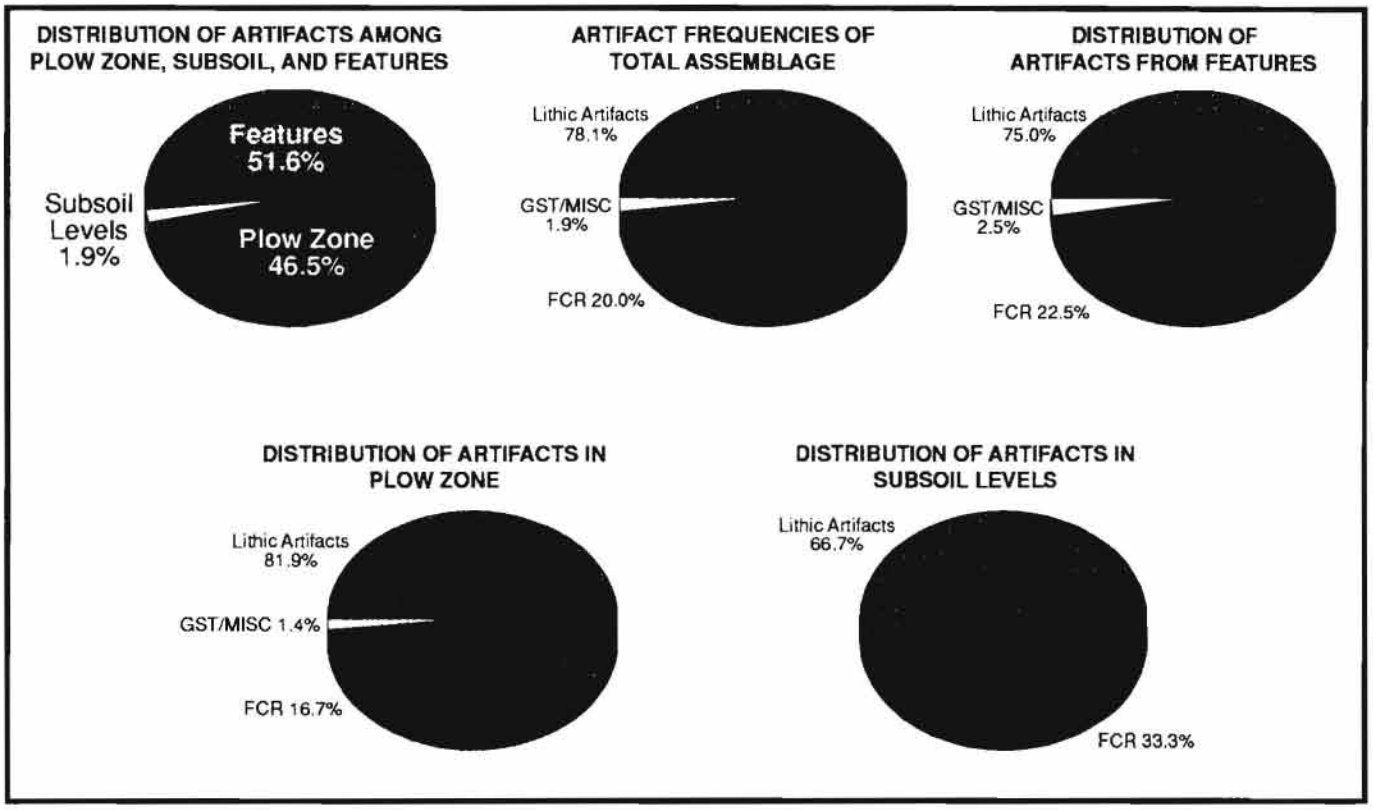


FIGURE 44

Artifact Percentages - Area E

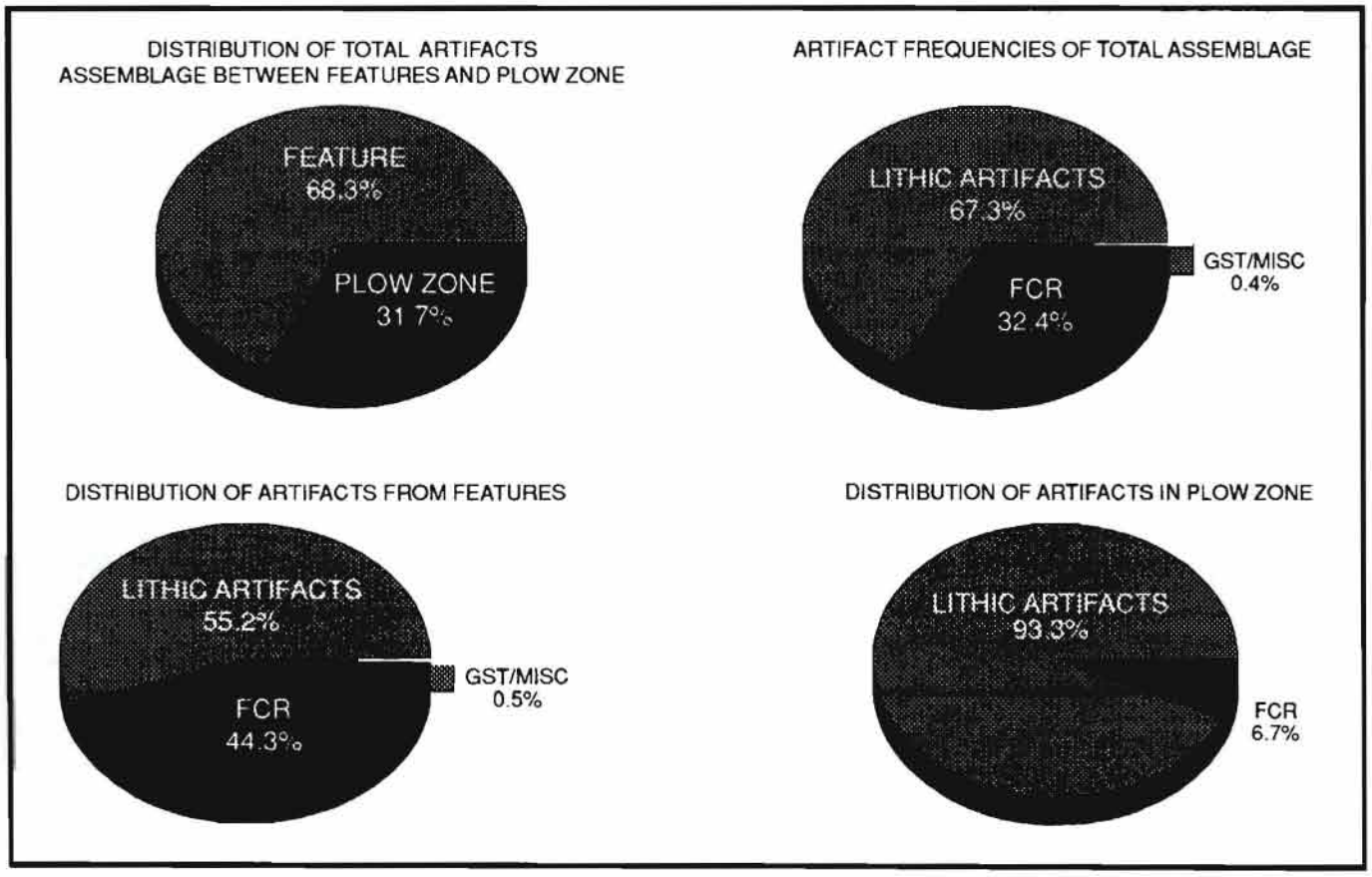


FIGURE 45

Artifact Percentages - Area F

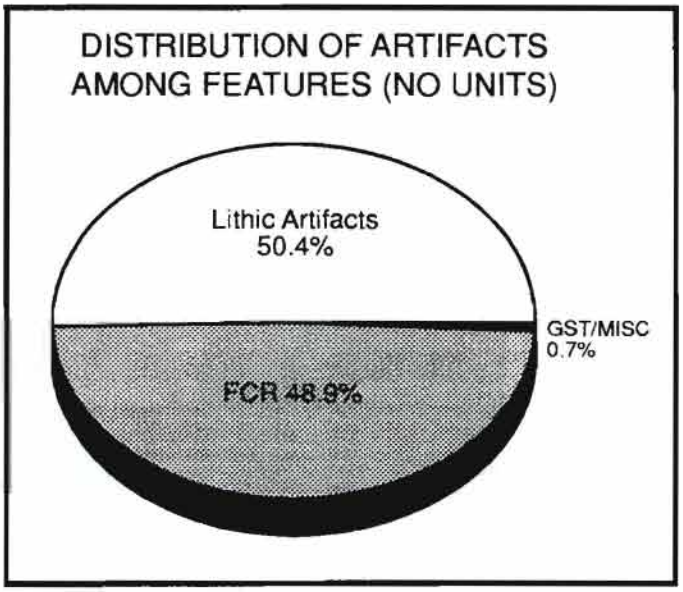
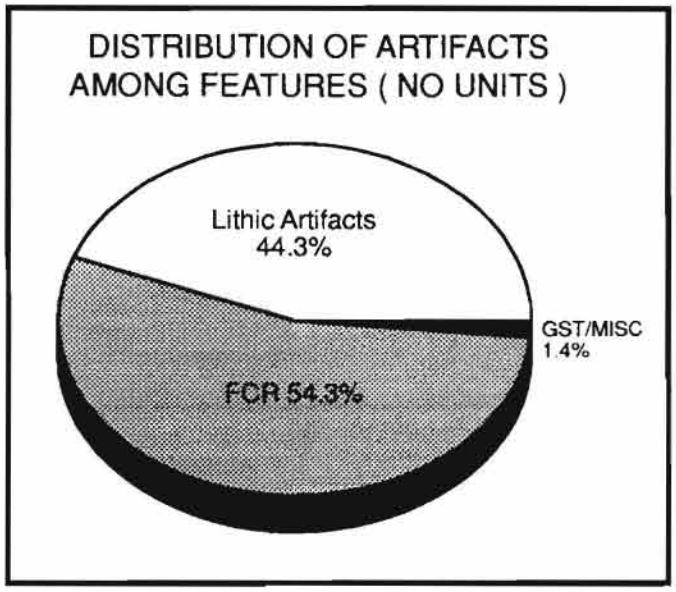


FIGURE 46

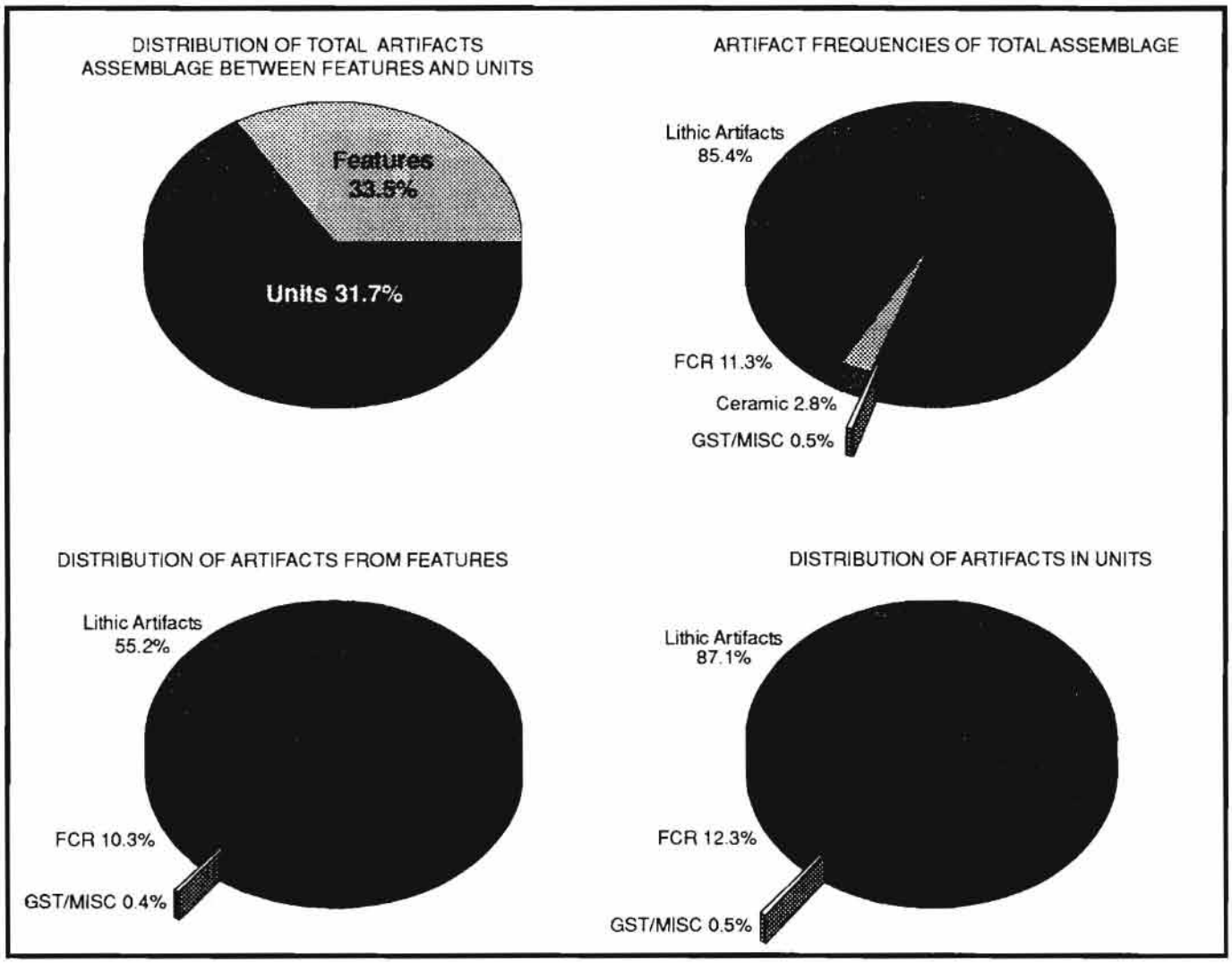
Artifact Percentages - Area G



Figures 40 - 47 also show that in general, fire-cracked rock was more commonly found in features than in excavation units, including plow zone test units. In some parts of the site (Areas D, E, F, G - the areas along Alston Branch), there were especially high percentages of fire-cracked rock in features. However, these areas also had the smallest samples and the lowest artifact and feature densities. Therefore, the observed patterns may be due to sample size rather than patterning of prehistoric behavior. Figures 40 - 47 also show that for the most part roughly equal proportions of artifacts were recovered from plow zone and feature contexts. However, there were some exceptions including Area C and the woods, where there were significantly more artifacts recovered from the excavation units, and Area E where there were significantly more artifacts recovered from the features. Analysis of the artifacts and their distributions will be presented for each individual site area and the site as a whole in later sections of this report.

FIGURE 47

Artifact Percentages - Woods



Excavated Features

A total of 859 prehistoric features were excavated in all areas of the Pollack Site and Table 9 shows the distribution of the varied feature types in each area. Figure 48 shows a graphic summary of the feature type proportions from Table 9 for the entire site and Figures 49 and 50 show the same data for individual site areas. As can be seen from these figures, nearly 90 percent of the features are Type 1 features, which are the remains of prehistoric houses. As was noted earlier, Type 2 features are also related to prehistoric houses and when these features are combined with Type 1 features, 91 percent of the features at the Pollack Site are prehistoric houses.

FIGURE 48

Feature Type Percentages for All Areas Combined

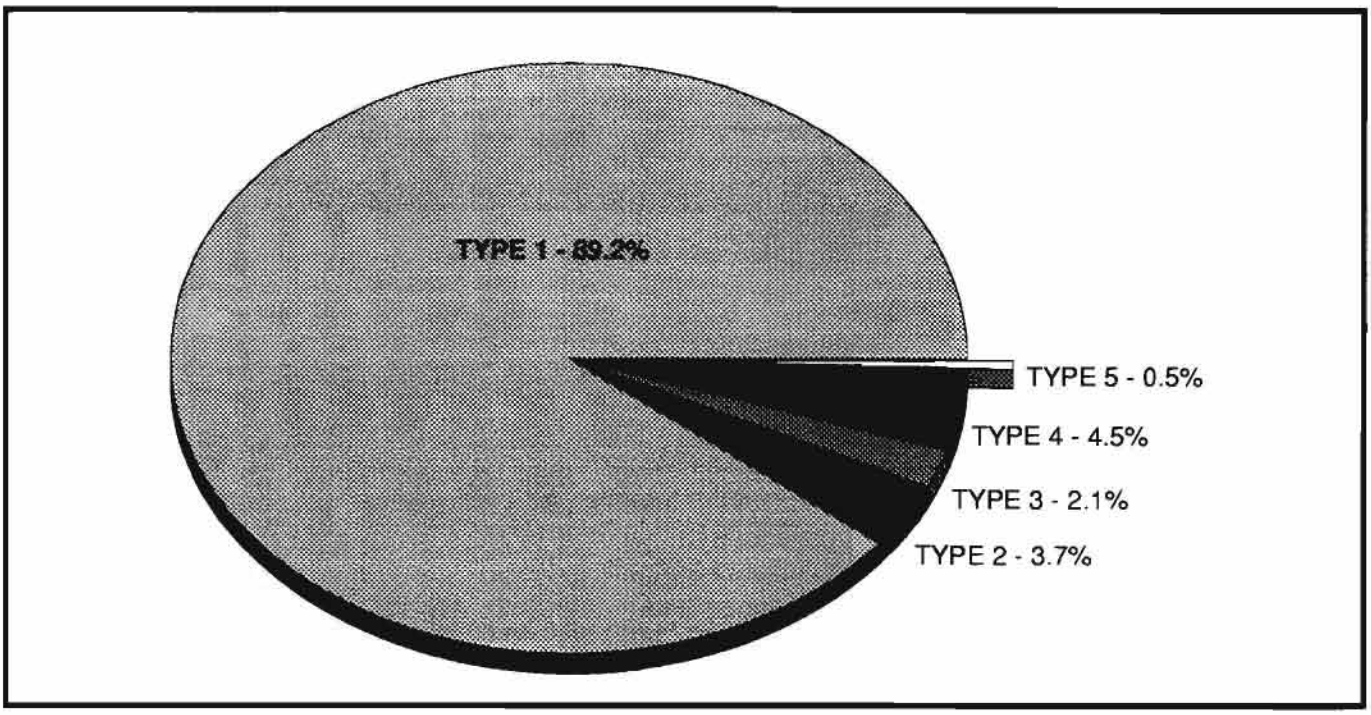


TABLE 9

Feature Types by Site Area

AREA	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	N/A	TOTAL
A	92	4	1	6	1	1	105
B	178	13	9	13	--	4	217
C	406	9	7	15	2	6	445
D	28	2	1	2	--	1	34
E	22	1	--	--	--	--	23
F	18	--	--	--	2	--	20
G	11	1	--	--	1	--	13
Woods	--	--	--	--	--	2	2
TOTALS	755	30	18	36	6	14	859

FIGURE 49

Feature Type Percentages - Areas A, B, and C

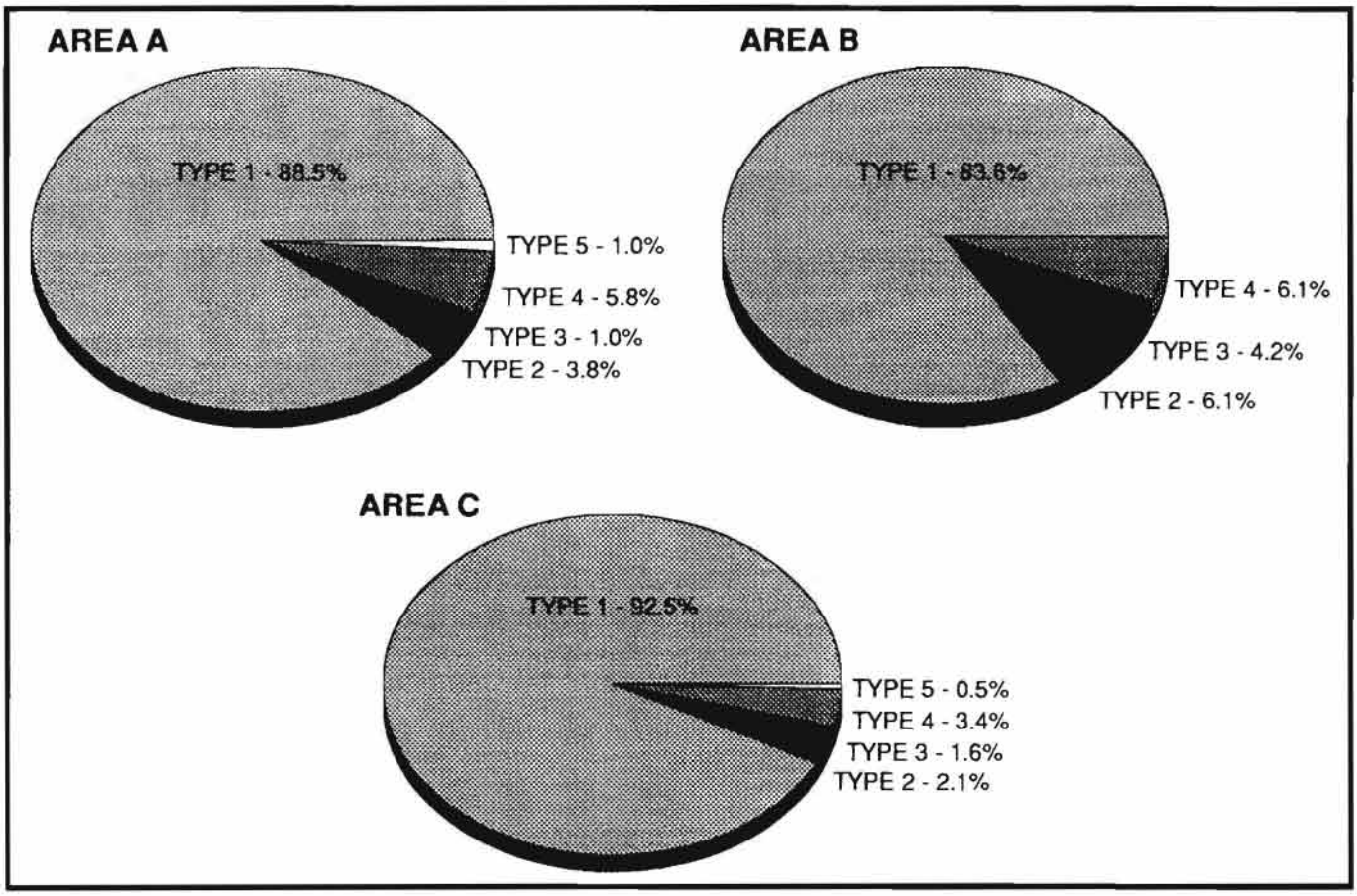


TABLE 10

Feature Dimensions - All Areas Combined

	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5
Number of Features	755	30	18	38	4
LENGTH (cm)					
Minimum/Maximum	20/450	130/510	75/200	39/210	110/275
Mean	204.60	264.42	129.83	130.95	186.25
Standard Deviation	66.28	105.99	35.42	45.94	68.24
WIDTH (cm)					
Minimum/Maximum	15/260	50/515	30/100	30/105	55/115
Mean	69.86	141.46	63.58	62.84	81.25
Standard Deviation	30.68	97.04	20.37	22.53	25.62
DEPTH (cm)					
Minimum/Maximum	5/200	30/135	9/70	20/115	45/120
Mean	52.58	72.05	22.89	57.17	76.25
Standard Deviation	24.75	26.82	15.08	26.61	32.50

FIGURE 50

Feature Type Percentages - Areas D, E, F and G

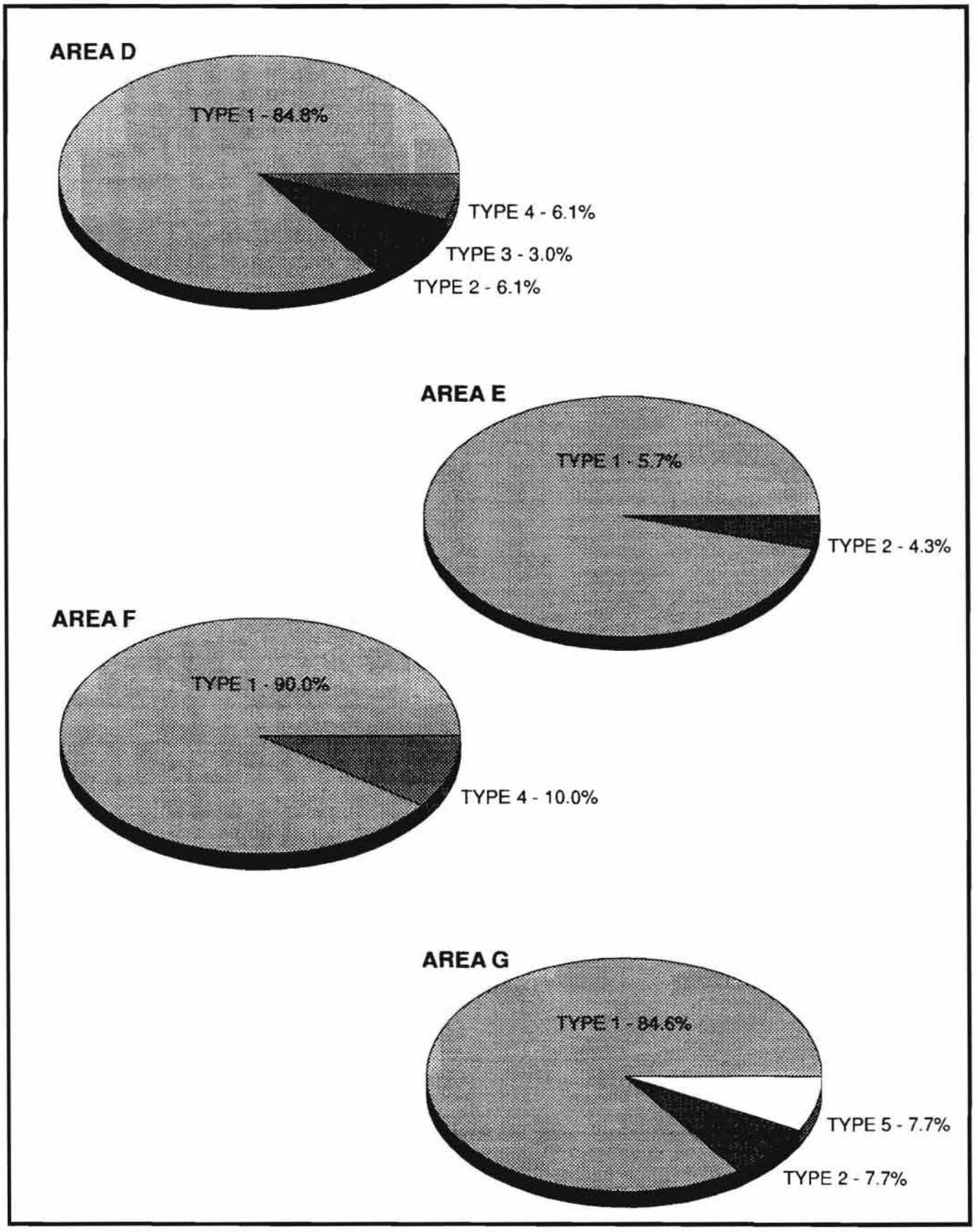


TABLE 11

Feature Dimensions by Area

			FEATURE TYPE				
			1	2	3	4	5
AREA A	Feature Count		92	4	1	6	1
	Length	Min./Max.	110/365	130/210	130	80/210	190
		Mean	207	167	130	128	190
		Std. Dev.	62	38	–	46	–
	Width	Min./Max.	34/155	50/515	75	35/80	70
		Mean	59	164	75	53	70
		Std. Dev.	18	198	–	15	–
	Depth	Min./Max.	9/105	30/70	43	20/75	120
		Mean	42	50	43	43	120
		Std. Dev.	20	18	–	23	–
AREA B	Feature Count		178	13	9	13	0
	Length	Min./Max.	60/400	162/490	100/200	39/180	–
		Mean	196	280	146	112	–
		Std. Dev.	67	102	35	49	–
	Width	Min./Max.	23/150	75/385	30/90	30/80	–
		Mean	61	145	66	54	–
		Std. Dev.	23	93	21	19	–
	Depth	Min./Max.	5/128	40/135	9/30	25/115	–
		Mean	43	69	16	56	–
		Std. Dev.	24	28	7	27	–
AREA C	Feature Count		406	9	7	15	2
	Length	Min./Max.	20/450	150/510	75/150	65/180	110/170
		Mean	203	308	108	136	140
		Std. Dev.	66	127	31	38	42
	Width	Min./Max.	15/260	85/180	33/74	30/105	55/85
		Mean	73	132	54	71	70
		Std. Dev.	32	35	15	24	21
	Depth	Min./Max.	15/200	47/118	15/70	30/114	45/60
		Mean	57	82	30	60	52
		Std. Dev.	24	23	20	21	11
AREA D	Feature Count		28	2	1	2	0
	Length	Min./Max.	130/450	195/275	135	175/200	–
		Mean	232	235	135	188	–
		Std. Dev.	72	57	–	18	–
	Width	Min./Max.	58/230	150/165	100	90/95	–
		Mean	110	158	100	92	–
		Std. Dev.	39	11	–	4	–
	Depth	Min./Max.	40/130	65/110	15	65/112	–
		Mean	78	88	15	89	–
		Std. Dev.	25	–	–	34	–

TABLE 11 (continued)

Feature Dimensions by Area

			FEATURE TYPE				
			1	2	3	4	5
AREA E	Feature Count		22	1	0	0	0
	Length	Min./Max.	125/410	225	--	--	--
		Mean	234	225	--	--	--
		Std. Dev.	74	--	--	--	--
	Width	Min./Max.	38/170	69	--	--	--
		Mean	76	69	--	--	--
		Std. Dev.	27	--	--	--	--
	Depth	Min./Max.	22/102	62	--	--	--
		Mean	65	62	--	--	--
		Std. Dev.	20	--	--	--	--
AREA F	Feature Count		18	0	0	2	0
	Length	Min./Max.	125/310	--	--	125/210	--
		Mean	195	--	--	167	--
		Std. Dev.	54	--	--	60	--
	Width	Min./Max.	38/122	--	--	40/75	--
		Mean	65	--	--	58	--
		Std. Dev.	25	--	--	25	--
	Depth	Min./Max.	20/78	--	--	50/62	--
		Mean	49	--	--	56	--
		Std. Dev.	17	--	--	9	--
AREA G	Feature Count		11	1	0	0	1
	Length	Min./Max.	170/292	245	--	--	275
		Mean	238	245	--	--	275
		Std. Dev.	42	--	--	--	--
	Width	Min./Max.	35/155	100	--	--	115
		Mean	81	100	--	--	115
		Std. Dev.	38	--	--	--	--
	Depth	Min./Max.	18/100	110	--	--	80
		Mean	54	110	--	--	80
		Std. Dev.	25	--	--	--	--

Table 10 shows a series of descriptive statistics for dimensions of each feature type for all areas of the site combined. Similar descriptive statistics for each site area are summarized in Table 11. The data in these tables show that there is a wide range of sizes, but that for all feature types there are modal sizes that define typical forms. Figures 51 - 58 show the distribution of the varied feature types in each of the site areas. Further analysis of these distributions will be provided later in this report for each individual site area.

FIGURE 51

Feature Type Distributions - Area A

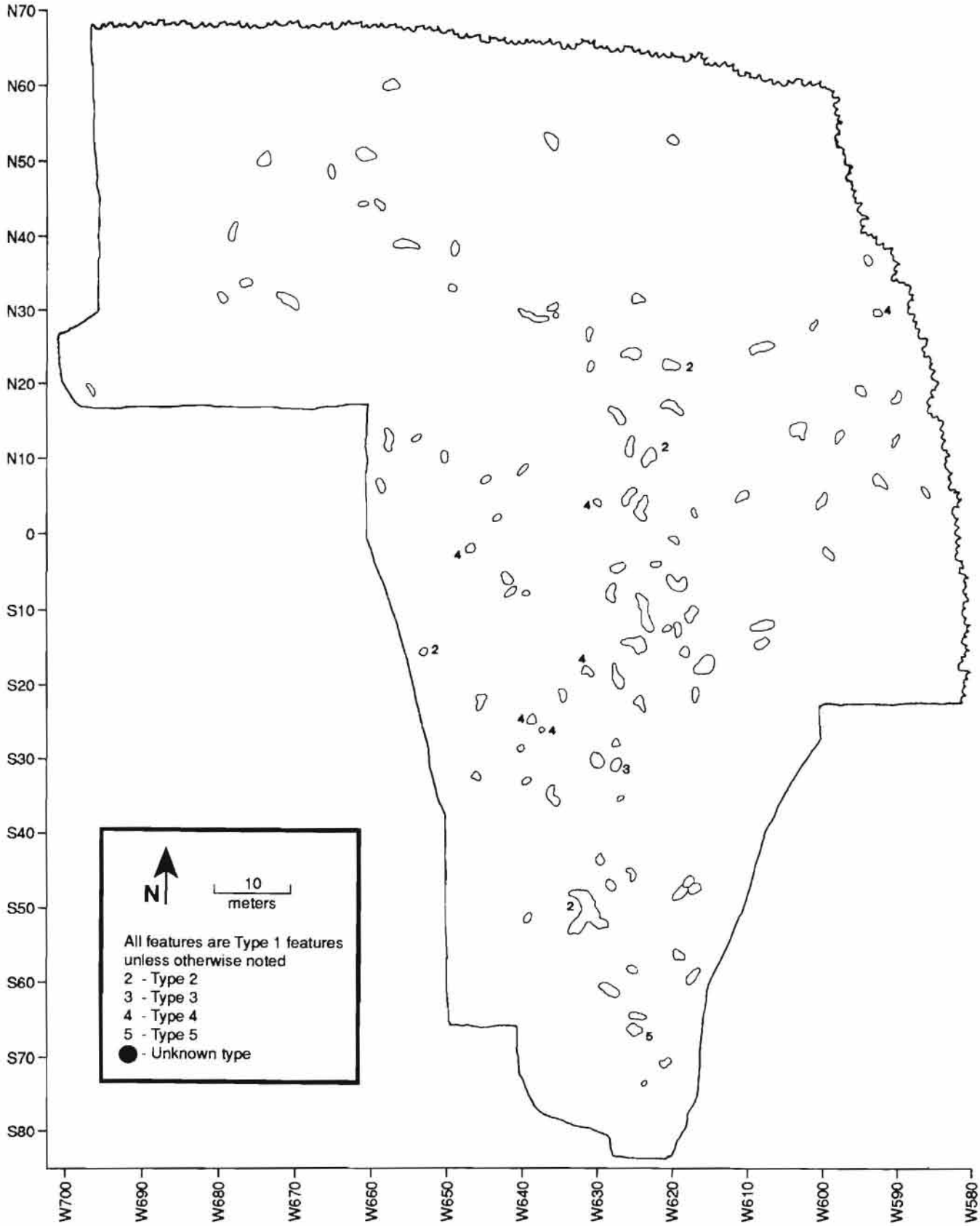
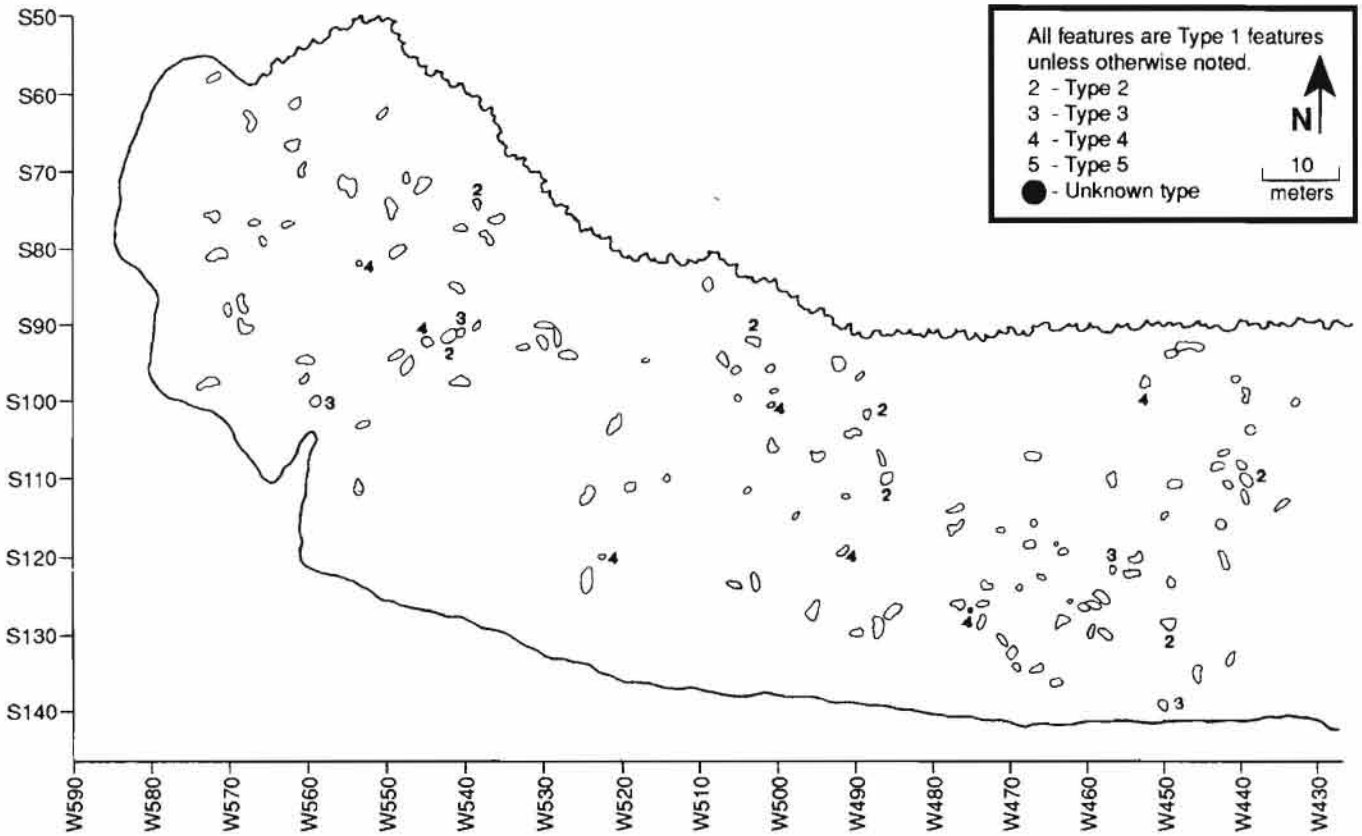


FIGURE 52

Feature Type Distributions - Area B



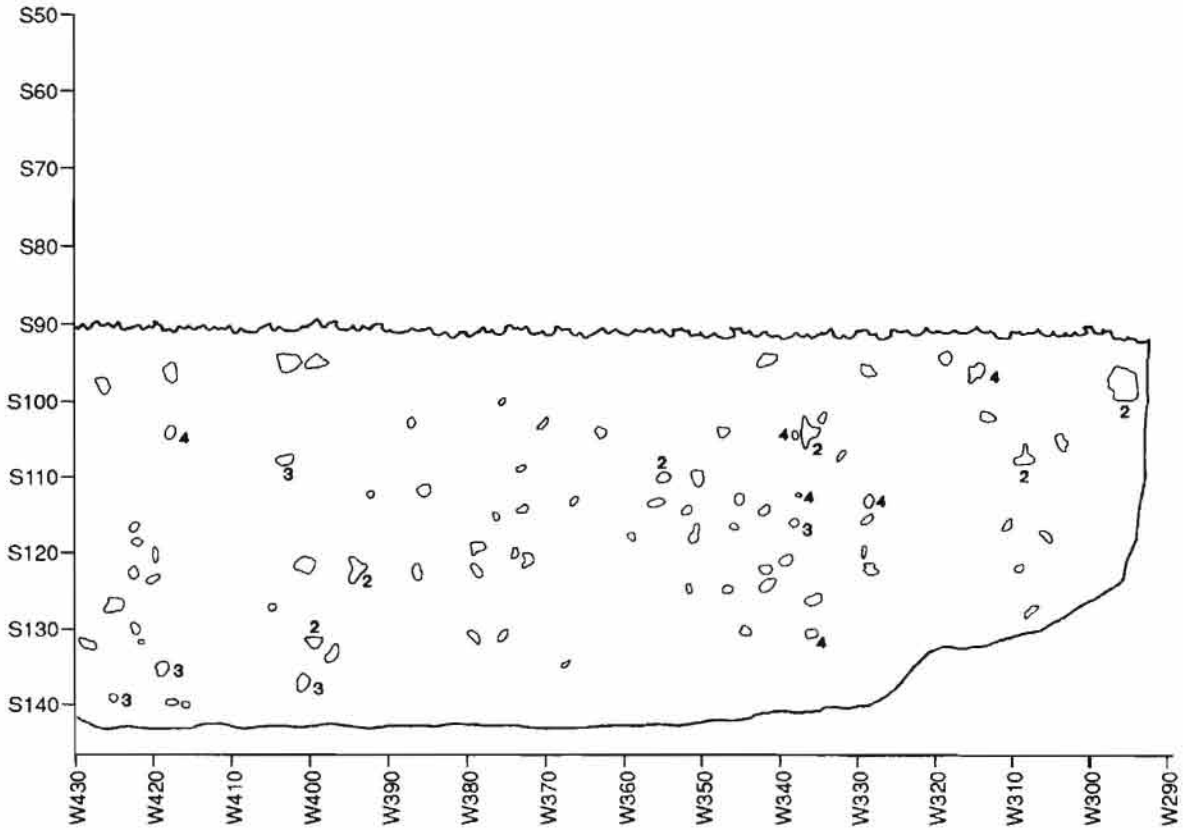


FIGURE 53

Feature Type Distributions - Area C - Northern Section

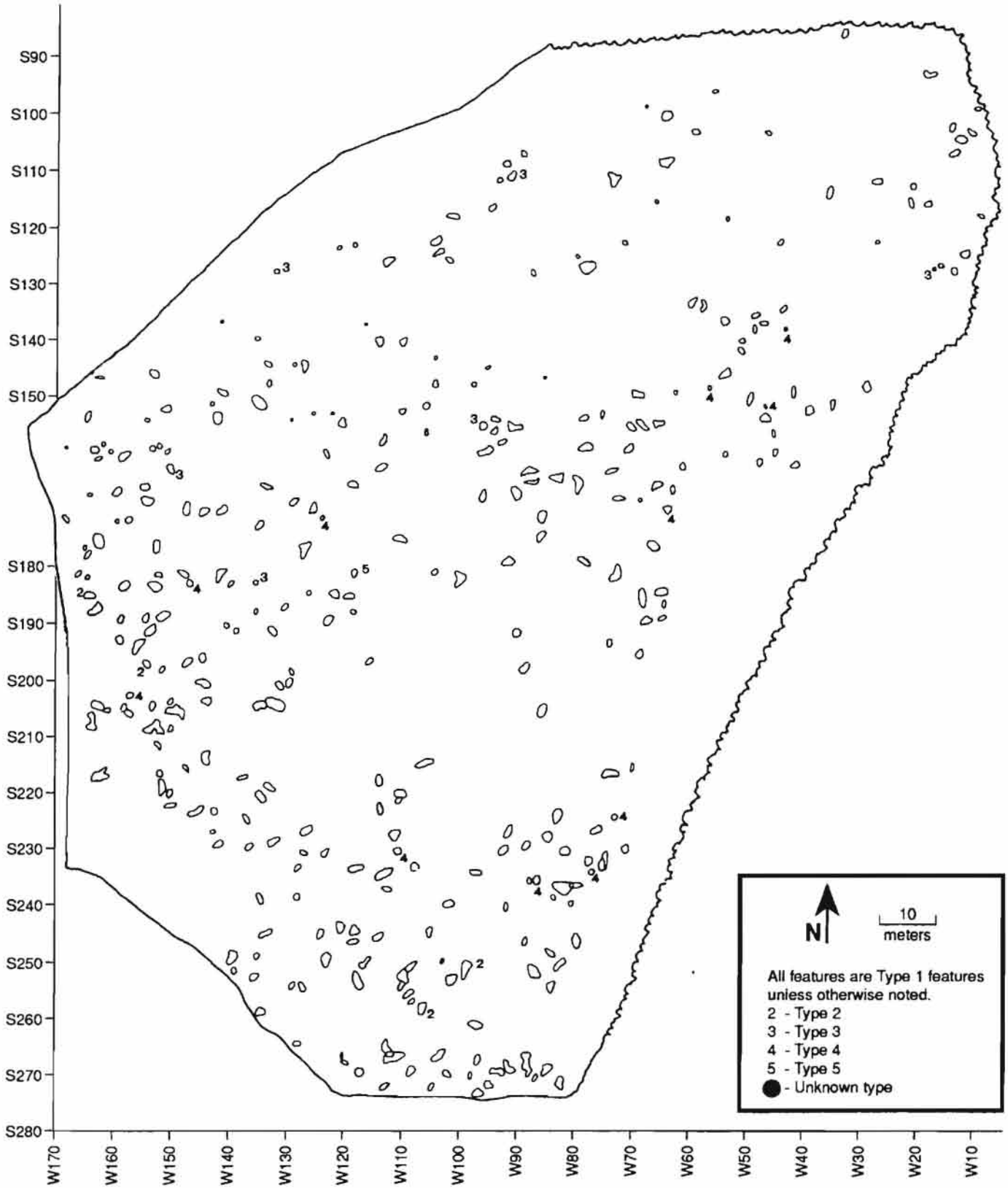


FIGURE 54

Feature Type Distributions - Area C - Southern Section

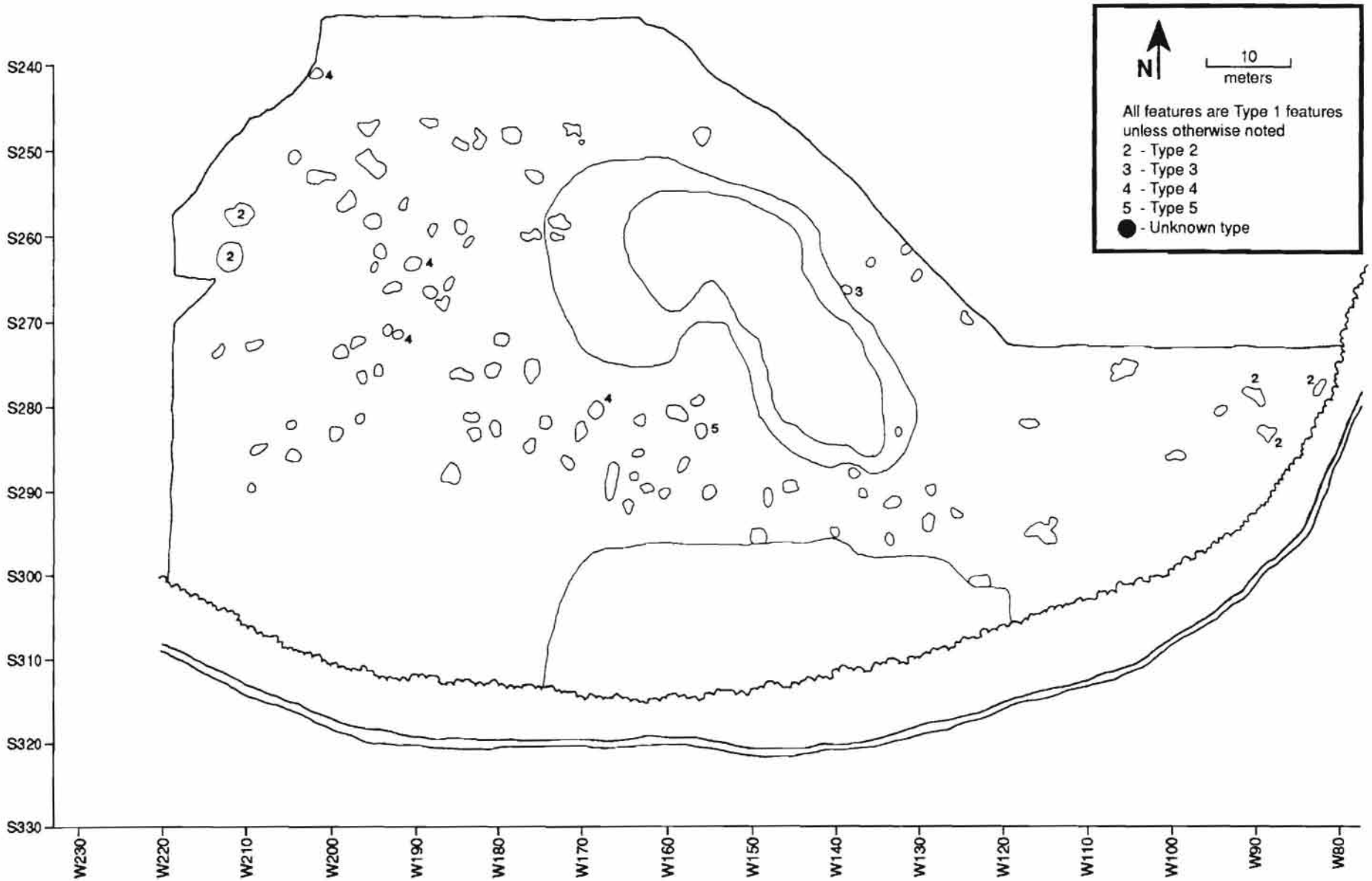


FIGURE 55

Feature Type Distributions - Area D

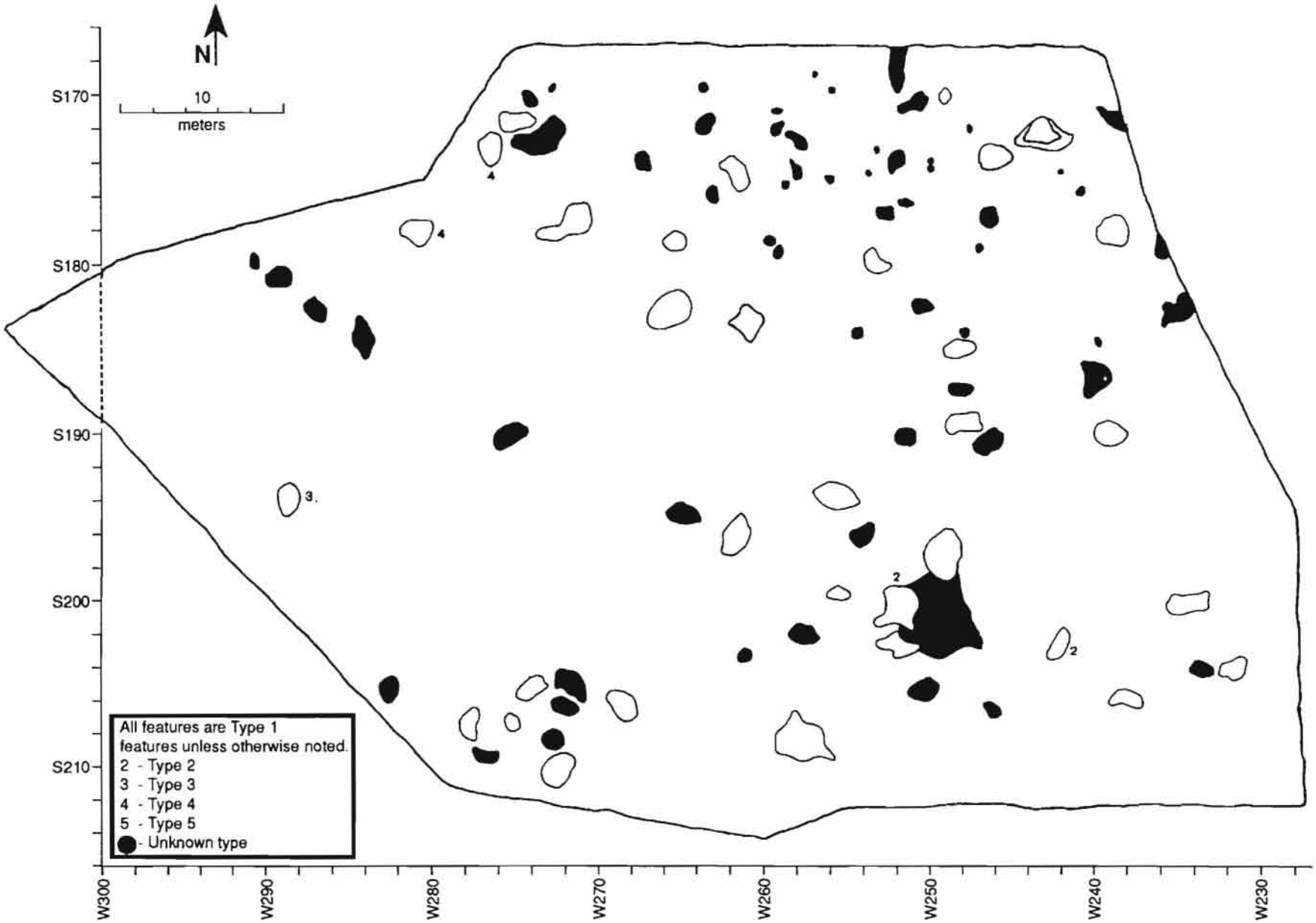


FIGURE 56

Feature Type Distributions - Area E

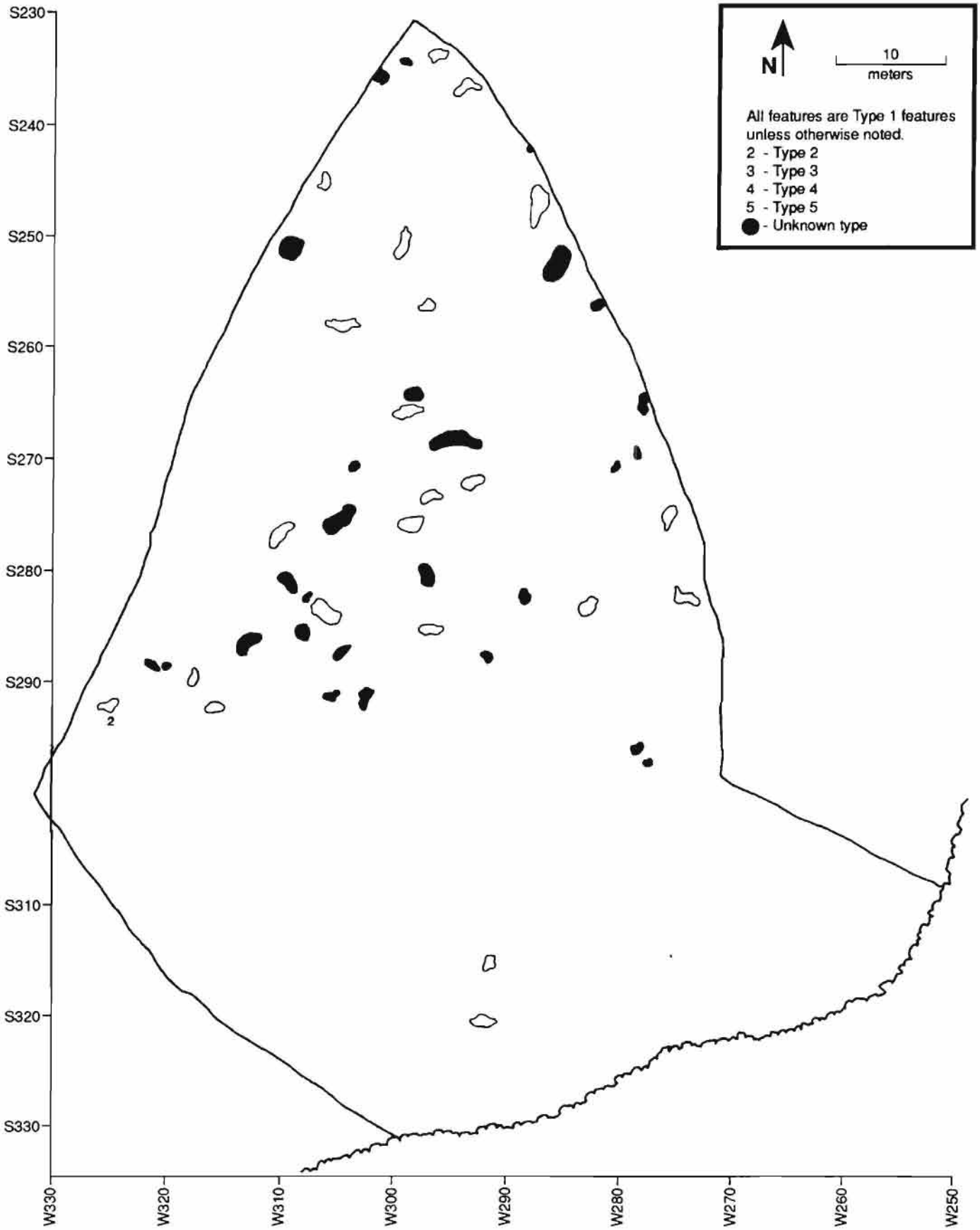


FIGURE 57

Feature Type Distributions - Area F

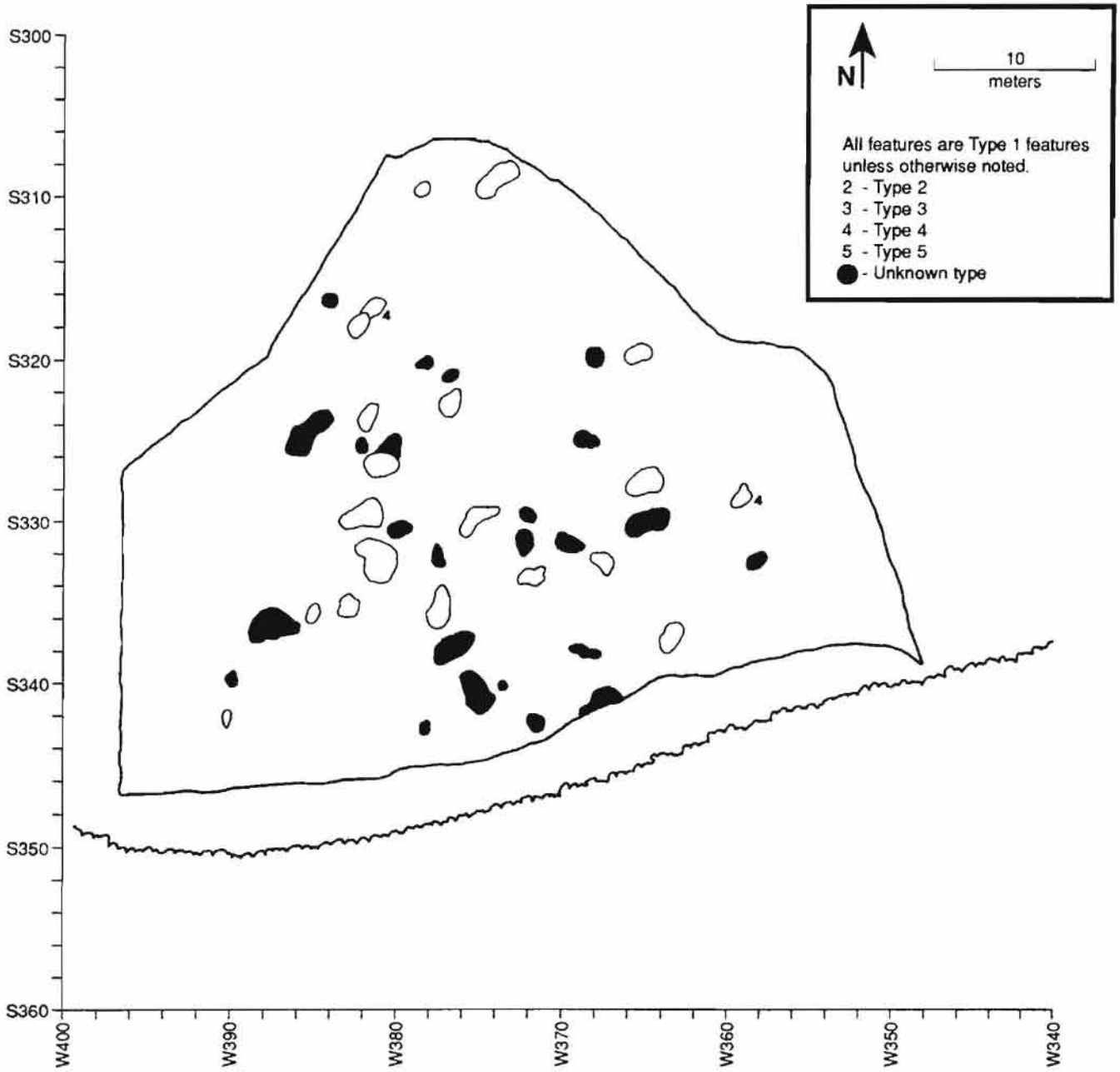


FIGURE 58

Feature Type Distributions - Area G

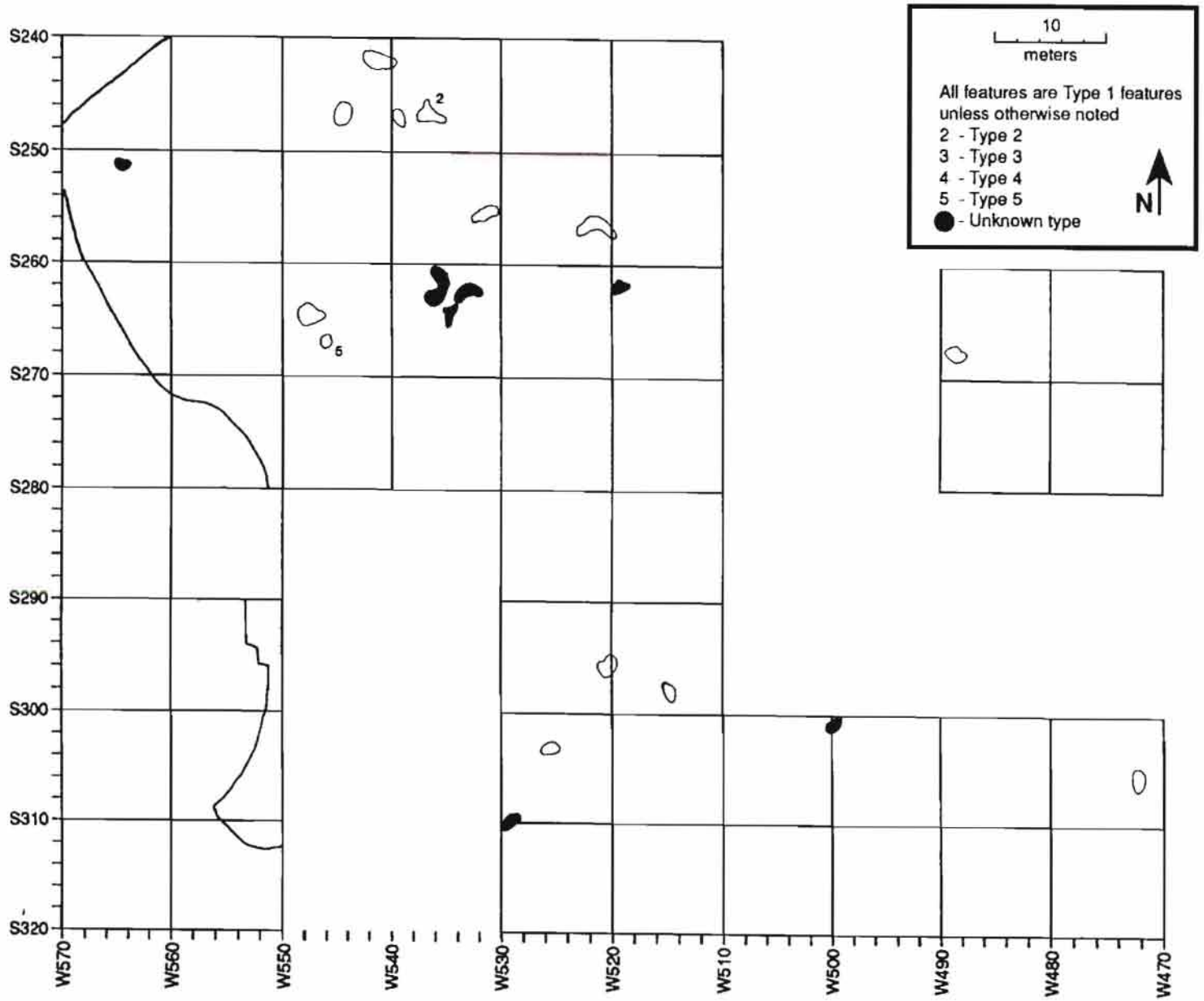


TABLE 12
Summary Catalog of Flotation from All Areas

	AREAS						
	A	B	C	D	E	F	G
Number of Samples	55	147	72	30	20	16	7
Number of Samples with Spores	48	132	63	22	16	12	5
Charred Seeds	68	24	17	37	2	2	0
Flakes	275	74	1	0	3	55	2
Ceramics	46	0	0	0	0	0	0
Nut Fragments	0	0	0	0	0	0	0

TABLE 13
Seeds in Flotation Samples by Site Area

	AREAS						
Charred Seeds	A	B	C	D	E	F	G
Lamb's-quarters	13	3	3	2	-	-	-
Noseburn	5	2	1	2	-	-	-
Copperleaf*	13	-	-	-	-	-	-
Purslane*	14	-	-	1	-	-	-
Solomon's Seal	2	-	-	3	-	-	-
St. John's Wort	6	-	-	-	-	-	-
Chokeberry	1	-	-	1	-	-	-
Acorn	1	-	-	-	-	-	-
Spurge*	1	-	-	-	-	1	-
Dogwood	1	-	-	-	-	-	-
Winterberry	2	-	-	-	-	-	-
Possoin Haw	1	-	-	-	-	-	-
Evening Primrose	2	-	-	-	-	-	-
Bristlegrass*	1	-	-	1	-	-	-
Collomia	1	-	-	-	-	-	-
Buffalo Berry	1	-	-	-	-	-	-
Self Heal	1	-	-	-	-	-	-
Tulip Tree	1	-	-	1	-	-	-
Dove Weed	-	2	-	-	-	-	-
Scleria	-	12	6	2	1	-	-
Pigweed	-	1	2	1	-	-	-
Sedge	-	1	-	-	-	-	-
Peppervine	-	1	-	-	1	-	-
Sassafrass	-	1	1	1	-	-	-
Raspberry	-	1	-	-	-	-	-
Smartweed	-	-	1	-	-	-	-
Vetch	-	-	2	2	-	-	-
Knotweed	-	-	1	-	-	-	-
Greenbriar	-	-	-	1	-	-	-
Sage*	-	-	-	1	-	-	-
Nightshade	-	-	-	1	-	-	-
Clammyweed	-	-	-	1	-	-	-
Widgeongrass	-	-	-	2	-	-	-
Oak	-	-	-	1	-	-	-
Timothy	-	-	-	1	-	-	-
Bedstraw	-	-	-	1	-	-	-
Scurf Pea	-	-	-	1	-	-	-
Grey Feather	-	-	-	1	-	-	-
Goosegrass	-	-	-	6	-	-	-
Wild Bean	-	-	-	1	-	-	-
Pokeberry	-	-	-	2	-	-	-
Bayberry	-	-	-	-	-	1	-

* European varieties

Floated Artifacts and Ecofacts

Flotation samples with a minimum volume of 15 liters were taken from almost all of the features excavated at the Pollack Site. However, in accordance with the sampling design described earlier in this report not all were analyzed. Table 12 shows a summary catalog of the flotation samples and the yield of artifacts and ecofacts was very small. Very little charcoal was found in the samples and no nut hulls were present, implying that organic preservation was very poor. Table 13 lists the common names of individual varieties of charred seeds found in each area, and again it can be seen that few ecofacts were recovered. In many cases, only single examples of certain seed types were found and there are only a few instances of multiple seeds being found from a single feature.

Table 14 lists the common names, scientific names, and the potential uses of the charred seeds found in the flotation. Several of the charred seed types are European varieties that had to be accidentally added to the soils that filled the prehistoric features. The presence of charred seeds of European origin in the prehistoric features is troubling because charring of seeds is usually seen as a sign that the seeds are of prehistoric origin and were charred by prehistoric peoples before they were introduced to the pit fill. The presence of charred European seeds suggests that such an assumption is unwarranted and makes the recognition of seeds that are truly

TABLE 14
Varieties of Seeds and Uses

COMMON NAME	GENUS/SPECIES	USES	REFERENCES
Lamb's-quarters	*Chenopodium album*	food	Medsger (1939:245), Tantaquidgeon (1972:128-129), Hall (1976:74)
Noseburn	*Tragia urens*	unknown	-
Copperleaf*	*Acalypha sp.*	unknown	-
Purslane*	*Portulaca oleracea*	food, medicinal	Medsger (1939:144), Niethammer (1974:121), Hall (1976:80), Erichsen-Brown (1979:417-419)
Solomon's Seal	*Polygonatum commutatum*	food, medicinal	Medsger (1939:162-163)
St. John's Wort	*Hypericum sp.*	food, medicinal	Ebeling (1986:247), Erichsen-Brown (1979:382)
Chokeberry	*Pyrus sp.*	medicinal	Ebeling (1986:63, 501)
Acorn	*Quercus prinus*	food	Ebeling (1986:210-219)
Spurge*	*Euphorbia sp.*	medicinal	Ebeling (1986:63)
Dogwood	*Cornus florida*	medicinal	Tantaquidgeon (1972:31, 116)
Winterberry	*Ilax verticillata*	dye, beverage	Erichsen-Brown (1979:191)
Possoin Haw	*Crataegus sp.*	food	Hall (1976:100)
Evening Primrose	*Oenothera biennis*	food	Hall (1976:248), Petersen (1977:66)
Bristlegrass*	*Setaria sp.*	unknown	Martin (1987:26)
Collomia	*Collomia grandiflora*	unknown	-
Buffalo Berry	*Shepherdia rotundifolia*	food, medicinal	Ebeling (1986:474, 517)
Self Heal	*Prunella vulgaris*	medicinal	Tantaquidgeon (1972:130)
Tulip Tree	*Liriodendron tulipfeca*	medicinal	Erichsen-Brown (1979:106-108)
Dove Weed	*Croton texensis*	insecticide	Ebeling (1986:105)
Scleria	*Scleria triglomerata*	unknown	-
Pigweed	*Amaranth retroflexus*	food, medicinal, other	Medsger (1939:245), Tantaquidgeon (1972:70-74), Niethammer (1974:118-119), Petersen (1977:154), Martin (1987:48-49)
Sedge	*Carex sp.*	food, building materials	Ebeling (1986:306)
Peppervine	*Ampelopsis arborea*	unknown	-
Sassafrass	*Sassafras sp.*	food, medicinal	Erichsen-Brown (1979:103-106)
Raspberry	*Rubus occidentalis*	food, medicinal	Tantaquidgeon (1972:120), Erichsen-Brown (1979:471)
Smartweed	*Polygonatum lepathifolium*	food, medicinal	Erichsen-Brown (1979:214-220), Kindscher (1987:248)
Vetch	*Vicia americana*	food, tying materials	Heitzer and Elsasser (1980:252)
Knotweed	*Polygonatum aviculare*	food, fish poison	Munson (1984:467)
Greenbriar	*Smilax sp.*	food	Hall (1976:52)
Sage*	*Salvia lyrata*	unknown	-
Nightshade	*Solanum sp.*	food	Ebeling (1986:704)
Clammyweed	-	unknown	-
Widgeongrass	*Ruppia maritima*	unknown	-
Oak	*Quercus sp.*	unknown	see Acorn
Timothy	*Phleum pratense*	see Acorn	-
Bedstraw	*Galium asprellum*	medicinal	Erichsen-Brown (1979:338)
Scurf Pea	-	unknown	-
Grey Feather	-	unknown	-
Goosegrass	*Galium aparine*	food, medicinal	Erichsen-Brown (1979:337-338
Wild Bean	*Phaseolus meticalfi*	food, medicinal	Ebeling (1986:483)
Pokeweed/berry	*Phytolacca americana*	dye, food	Medsger (1939:143), Hall (1976:79)
Bayberry	*Myrica pennsylvanica*	medicinal, food, dye	Erichsen-Brown (1979:193)

* European varieties

of prehistoric origin problematic. Similar occurrences of charred European seeds in prehistoric features was also seen at the adjacent Leipsic Site (Custer, Riley, and Mellin 1994).

Table 15 shows the occurrence of varied lithic raw material types among the debitage recovered from the heavy fractions of the flotation samples. No raw materials other than those noted in Table 15 were present, and the three main materials shown here are also the three main material types seen among the assemblage of debitage from the regular 1/4-inch mesh screening. Again, it should be noted that the amount of debitage recovered from the flotation is very small, even though the samples analyzed were the richest in artifacts found at the site. In sum, the artifact and ecofact assemblages from the flotation samples were very small.

TABLE 15
Raw Material Types Among Debitage from Flotation

AREA	QUARTZ	CHERT	JASPER
A	20	101	148
B	25	17	32
C	0	0	1
D	0	0	0
E	1	1	1
F	2	16	37
G	1	1	1