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THE ARCHAEOLOGICAL INVESTIGATIONS AT
THE SOUTHWOLD EARTHWORKS, 1935 and 1976
by David G. Smith
(1977)

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Abstract

Archaeological investigations were conducted at the Southwold Earthworks site in 1976 by the Museum of Indian Archaeology for the Historic Parks and Sites Branch, Parks Canada, and the data recovered from these excavations and previous excavations in 1935 were examined during the winter of 1976 and 1977. The data recovered provided information on the identity of the inhabitants, the date of occupation, the nature of the earthworks, and the nature of the occupation both inside and outside the village. The report includes a summary of information on the prehistory of southern Ontario, as well as background information pertaining to the site. A detailed discussion of settlement pattern and ceramic data is provided as well as conclusions in terms of the site and its relationship to the native occupation of southwestern Ontario.

Precis

The Southwold Earthworks site was investigated by the National Museum of Canada in 1935, and by Parks Canada, who currently own the property, in 1976. This report provides the results of the analysis of the data recovered by both investigations, as well as providing background information on the site and a summary of the prehistory of southern Ontario.

Southwestern Ontario has been inhabited by native peoples for at least 11,000 years. The first period of occupation is the Palaeo-Indian period (11,000 B.C. to 5,500 B.C.) followed by the Archaic period (5,500 B.C. to 1,000 B.C.). The Early Woodland period began at about 1,000 B.C. with the introduction of pottery and led to the Middle Woodland period which began at about 700 B.C. The Late Woodland period, to which the Iroquoian occupation of Ontario belongs, began at about A.D. 600. The Ontario Iroquois Tradition has been divided into Early (A.D. 600 - A.D. 1300) Middle (A.D. 1300 - A.D. 1400) and Late (A.D. 1400 - A.D. 1650) stages. The Neutral who were part of the Late Ontario Iroquois stage, appear to have occupied most of southwestern Ontario during prehistoric times, but were concentrated east of the Grand River by the historic period. They had little contact with Europeans, but it appears that their culture was very similar to that of the Huron. The Neutral were dispersed by other Iroquoians from New York in A.D. 1651.

The Southwold Earthworks site is a Neutral village site located near St. Thomas, Ontario. It is situated on level ground about one mile from the nearest major stream, although a small spring-fed creek runs through the site. Analysis of

the data recovered during both the 1935 and the 1976 excavations have produced the following information and conclusions. When it was occupied, the village consisted of at least 18 longhouse structures which varied from 12 m. to 50 m. in length and 5 m. to 6 m. in width. These structures had centrally located internal hearths, small numbers of pits, and bunk lines located on both sides of the buildings. They varied extensively in orientation and were located closely together, perhaps for reasons of defence. There is the possibility that there was an open space in the center of the village which may have been used as an activity centre. The larger midden deposits appear to have been located outside of palisading surrounding the entire site. This palisade included several rows of stockade with two earth walls as foundations. It appears that the inner earthwork was built some time after the outer wall.

The artifacts recovered included a full assemblage of ceramic, lithic and bone material, although the total collection was rather small. A comparison of design motifs on the exterior rims of the pottery vessels indicated that there were significant differences in the distribution of motif categories within the site which may be evidence for distinctive social groups within the village. The site also appears on the basis of pottery types (Wright 1966, 86) to have been fairly closely related with the Lawson site, which is located near London, Ontario.

It has been estimated that the village was occupied at about A.D. 1500 and housed between 800 and 900 persons. Further conclusions about the occupation of the site cannot be made because of the limited nature of the data, and because very little comparative information is available at present.

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Preliminary Data

Introduction

The Southwold Earthworks site (AeHi-1) is a prehistoric Neutral village site located near the village of Iona in Southwold township, Elgin County, Ontario. The site is located on land presently owned by Parks Canada, and was declared a Historic Site in 1929. In 1935 extensive excavations were carried out by W. J. Wintemberg of the National Museum of Canada, who was assisted by W. W. Jury of the University of Western Ontario. In 1976, further excavations were conducted by a small team of archaeologists from the Museum of Indian Archaeology, the University of Western Ontario. The 1976 excavations were initiated by Parks Canada, Historic Parks and Sites Branch, who issued a contract for test investigations to aid in interpretation of the site to the general public.

The following paper reports the results of research conducted by the author with respect to the Neutral and the Southwold Earthworks site, and the results of both the 1935 and the 1976 investigations of the site. The analysis has been limited because the data from 1935 is incomplete, and because the 1976 field work was initiated as a preliminary assessment of the site, as opposed to a large scale research project. The objective of the investigations has not been a total description of the occupation of the site, but rather to provide information on some aspects of this occupation. The results reported in this paper can be employed as background for further work in the area or for limited comparative analysis with other Iroquoian sites.

The report has been prepared in such a way as to provide the reader with as much information as necessary to understand the results of the investigation of the Southwold site. In order to provide a context for a description of the occupation of the site a comprehensive general survey of what is known of the prehistory of Ontario as well as both ethno-historical and archaeological data pertaining to the Neutral Iroquois is provided. A general survey of literature dealing with the Southwold site is also included. This background information is followed by a summary of the observations made during both the 1935 and 1976 field seasons, and the results of analysis of settlement pattern data, artifacts, and floral remains. The report is concluded by a discussion of the relationship of the Southwold site with other Neutral sites, and conclusions on its significance in terms of the prehistory of the area.

Background Prehistory of Ontario

Archaeological evidence suggests that Ontario has been occupied continuously by native people for at least 11,000 years. This occupation has resulted in a sequence of continual change in ecological adaptation and cultural patterns. The habitation of the Southwold site formed an integral part of the continuum, so that in order to understand this habitation it is necessary to have some knowledge about the development of the native occupation of Ontario. The following chronological outline of the prehistory of southwestern Ontario is included to provide a temporal context for discussion of the society that was responsible for the material remains at the Southwold site.

Very little is known about the people who lived in southwestern Ontario during and immediately after the retreat of the ice sheet of the Valdres glacial period. It has been

estimated that the area became inhabitable at about 11,000 B.C. to 10,000 B.C. (Wright 1972, 11). The vegetation changed during the retreat of the glacier from tundra to spruce-herb to spruce-pine forest which gave way to more temperate vegetation at about 7,800 B.C. (Noble 1975b, 100). Caribou appears to have been the main large animal living in the area at the time, although mastodons may have survived during the earlier periods, and moose migrated into the area at about 6,000 B.C. (Noble 1975b, 100). The people who lived in Ontario between ca. 11,000 B.C. and 5,500 B.C. have been termed the Palaeo-Indian culture. Their most distinctive characteristics were the use of a variety of projectile points including the fluted points of the Clovis type (Garrad 1971; Storck 1974), and lanceolate points (Storck 1972). Palaeo-Indians appear to have been hunter-gatherers who depended on caribou for much of their subsistence, although they may have hunted both mastodons and moose. Sites that have been located in Ontario are generally situated on glacial lake shore lines. There is nothing known about the social patterns of the Palaeo-Indians.

Between 6,000 B.C. and 5,000 B.C. apparent influence and migration from the south brought about the development of the culture known as Archaic. This development resulted in a larger population of hunter-gatherers occupying southwestern Ontario, who used a more varied complex of stone and bone tools than the preceding Palaeo-Indians. Native copper was also used for the first time. The most predominant Archaic culture to develop was the Laurentian, which appeared at about 3,500 B.C. and lasted until circa 1,000 B.C. (Noble 1975b, 106). The Archaic peoples subsisted by hunting deer, elk, bear and beaver, fishing, and gathering wild plants (Wright 1972, 27). They developed distinctive mortuary practices, burying the dead in cemeteries and accompanying the burials with grave goods, and, often with red ochre.

Many of the characteristics of the Archaic period survived into the Early Woodland period, which began with the introduction of the use of ceramics at about 1,000 B.C. (Noble 1975b, 107).

The first pottery to be used in Ontario is called Vinette 1, and was, apparently, introduced from New York (Noble 1975b, 107). The lithic assemblage of the Early Woodland cultures remained basically the same as that of the Archaic. Early Woodland sites have been located along the north shore of Lake Erie (Spence et al. 1976) but very little has been published concerning this period.

The Middle Woodland period began about 700 B.C. and is important to this study because it was the direct precursor of the Iroquoian occupation of Ontario. Cultural traits such as regional differentiation, riverine settlement patterns and a greater complexity in ceramics (Noble 1975b, 107) reflect tendencies which were to become typical of the later Iroquoians. It appears that the Middle Woodland cultures were influenced to a considerable extent by the Hopewell cultures which developed in the northern part of the present day United States, especially in Ohio. Hopewellian traits, such as ceremonialism in burial practices, including burial mounds (Johnston 1968) were adopted in Ontario. The most important development to occur during Middle Woodland times was the adoption of agriculture by the Princess Point culture at about A.D. 500 (Noble 1975a, 57; Noble 1975b, 108). This Princess Point culture was predominant along the north shores of Lake Erie and shows definite relationships with cultures located along the southern shores of the same lake. Princess Point has been identified as ancestral to the Glen Meyer branch of the Ontario Iroquois tradition which began the Late Woodland period at about A.D. 600 (Noble 1975b, 108).

The Early Ontario Iroquois stage was comprised of the development of two separate branches, Pickering in southeastern

Ontario and Glen Meyer in southwestern Ontario. The Glen Meyer branch was characterized by habitation in small but well defined villages located on defensible sites and surrounded by palisades (Wright 1966, 22), thus indicating that the patterns of warfare that were in evidence in the Late Ontario Iroquois stage began at an early date. The major area of Glen Meyer occupation appears to have been in Oxford and Norfolk counties in central southwestern Ontario but components have been noted across most of the area between Lake St. Clair and Lake Ontario (Noble 1975a, 45). Glen Meyer villages demonstrate the beginnings of the concern for internal arrangement of formal village life which characterized later Iroquoian settlement pattern. The villages consisted of a small number of short longhouse structures which show some internal arrangement as to hearth alignment, clustering of pits, and dividing walls (Noble 1975a, 45). The subsistence patterns for the Ontario Iroquois also have their origins with Glen Meyer. They depended extensively on hunting, fishing and gathering on a seasonal basis, but it would appear that agriculture became very important and allowed the year round occupation of villages (Noble 1975a, 46). The main cultigen was corn, but other crops may also have been developed. Glen Meyer pottery decoration showed a development from corded stick and cord punctate to incising which is predominant in the Middle and Late Iroquois stages. The most common pottery types are Ontario Oblique, Glen Meyer Oblique, Middleport Criss-Cross, and Stafford Stamped (Wright 1966, 26-27). Castellations appeared for the first time during the Glen Meyer stage, ceramic pipes were in use, and the lithic assemblage was well developed (Wright 1966, 24-27; Noble 1975a, 46-47). The mortuary practices of Glen Meyer people are not well known, but it is apparent that they did not practice ossuary interment (Noble 1975a, 47).

At about A.D. 1300, Glen Meyer cultural development was interrupted by the introduction of Pickering traits to southwestern Ontario. This interruption may have occurred by means of the conquest of the Glen Meyer people by Pickering people and the subsequent absorption of the victims by the conquerors. The merging of the two branches resulted in the development of a single culture known as Middleport. This comprises the Middle Ontario Iroquois stage. The Middleport culture in southwestern Ontario was directly ancestral to the Neutral population in this area.

Very little is known about the Middleport occupation of the area of southwestern Ontario west of Brantford, as little work has been done in this area. Data on the Middleport stage, however, has been recovered in other areas of southwestern Ontario, notably at the Nodwell site in the Bruce peninsula (Wright 1974), and in the Crawford Lake area near Milton, Ontario (Finlayson et al. 1973).

Middleport developed directly out of the merging of the Pickering and Glen Meyer branches, producing culture traits which were fairly homogeneous over the entire area of occupation. This area included most of southern Ontario and took in a much greater region than the Early Ontario Iroquois stage. This is suggestive of a population increase after the Early Ontario Iroquois stage (Wright 1966, 64). In general, Middleport retained many of the characteristics of the Early Ontario Iroquois stage, but included traits which differentiated it. The settlement patterns remained much the same as those of the Glen Meyer branch; that is, formal village habitation was practiced with some small camp sites. Middleport villages were generally larger, however, and the longhouse structures were longer (Noble 1975, 45; Finlayson et al. 1973, 27-38). The site locations of Middleport villages were usually in easily defended areas close to water although this was not always the case. Villages were often surrounded by

palisades and some showed definite signs of village expansion (Finlayson et al. 1976, 20). The mortuary practices of the Middleport people changed radically with respect to their predecessors; ossuary burial was fully developed during the Middleport period, indicating that the notions of communal burial had changed. Concomitant to this change, it is possible that the ceremony of the Feast of the Dead (Trigger 1969, 106-112) had its beginnings during this stage. Subsistence patterns appear to have been practically the same as Glen Meyer, with hunting, fishing, and gathering being practiced as well as agriculture. Corn was the main cultigen, but other plants such as beans, sunflowers, and possibly squash were also being cultivated (Finlayson et al. 1973, 140). This introduction of other cultigens may indicate an increased dependence on agriculture.

The artifact traits of the Middleport culture were largely the same as the preceding period. The dominant pottery types were Iroquois Linear, Ontario Oblique, Ontario Horizontal, Middleport Oblique, and Lawson Incised some of which were present during the Glen Meyer period, but in different ratios (Wright 1966, 64-65). The greatest change between Middleport and Glen Meyer in terms of artifacts was the development during the Middleport period of a well developed ceramic pipe complex. Lithics and bone artifacts demonstrated no great changes (Wright 1966, 65).

The Middleport period appears to have lasted only about 100 years (A.D. 1300 to A.D. 1400), after which began the internal cultural divisions that resulted in the separate branches of the Late Ontario Iroquois stage. By A.D. 1500, or approximately at the time the Southwold village was occupied, the separation was established enough to differentiate the Neutral from the other branches of the late stage. The available data on the Neutral occupation of southwestern Ontario are discussed in the next two sections.

Summary Of Ethnographic Data On The Neutral

The ethnographic data on the Neutral is based on the contact between the Iroquoian people of southern Ontario and the French, which began about A.D. 1600. Compared to the literature which has been amassed concerning the Huron, available sources for the Neutral are quite limited. Very little direct contact between the Neutral and Europeans occurred prior to the dispersal of the Neutral in A.D. 1651, whereas a permanent Jesuit mission had been established in Huronia as early as A.D. 1615. The ethnographic description of the Ontario Iroquois came from the writings of Champlain, Father de la Roche Daillon, and the Jesuit Relations. The few Europeans who did visit the Neutral described their culture as being very similar to that of the Huron. In this paper, direct description of the Neutral from ethnographical sources and archaeological material will be used when possible, supplemented when necessary by analogy with the Huron.

Although European contact with the Neutral nation was extremely limited, the Neutral were known to the French priests and explorers in the region at a very early date. When Champlain first entered Huron territory in A.D. 1615 he was told about a group of people who occupied a fairly large tract of land to the south of Huronia. These Indians were said to be at war with only the Mascoutin, and not the Huron or the League of Five Nations, and, therefore, they were called Neutral. Champlain reported that the Neutral produced large quantities of tobacco, and also that they were very powerful, being able to put four thousand warriors into the field (Ridley 1961, 1). Although Champlain wished to visit the territory of the Neutral, he was discouraged from doing so by the Ottawa (Harris 1901, 28). The reasons for this are not clear, but it appears that the Huron and their Algonkian allies wanted to monopolize the benefits of contact with the French. This rivalry plagued the French for years

to come, and was largely responsible, it seems, for the failure of European relations with the Neutral.

The first recorded European contact with the Neutral was made by Father Joseph de la Roche Daillon, a Recollet priest, who entered Neutral territory in A.D. 1626. Because of Huron propaganda he was not well received, but he managed to travel fairly extensively in their territory, counting twenty-eight villages and viewing some aspects of Neutral life-ways. He reported that Neutral culture was very similar to that of the Huron; they grew corn, beans, and squash, hunted deer, moose and other wildlife, fished from the rivers, lived in villages similar to those of the Huron, and spoke a language only slightly different from the Huron (Ridley 1961, 2; Harris 1901, 30). In fact, their languages were so similar that each nation referred to the other as Attiwondaronk, or 'people who speak a slightly different language'. The French, such as the Jesuits and Gabriel Sagard, often referred to the Neutral as Attiwondaronk. Daillon's attempt to establish a mission failed.

Fathers Jean de Brebeuf and Joseph Chaumonot visited the Neutral in A.D. 1640 in another attempt to establish a mission. The Relation of A.D. 1641 describes their expedition and provides the most detailed extant description of the Neutral. They reported that the Neutral nation contained about forty villages with at least 12,000 inhabitants. In ten villages that they visited they estimated 500 hearths and 3,000 people. The subsistence economy of agriculture, hunting, fishing, and gathering is described as follows.

The food and clothing of this nation do not greatly differ from those of our Hurons: they have Indian corn, beans, and squashes in equal plenty; the fishing likewise seems equal, as regards the abundance of fish, of which some species are found in

one region, that are not in the other. The people of the Neutral Nation greatly excel in hunting Stags, Cows, wild Cats, wolves, black beasts, Beaver and other animals of which the skin and the flesh are valuable....They have also multitudes of wild Turkeys, which go in flocks through the fields and woods.

As for the refreshment of fruits, not more of them are found there than among the Hurons, unless it be chestnuts, of which they have plenty; and wild apples, a little larger than these (Jesuits 1896-1901, 21:195-197).

This Relation goes on to describe Neutral clothing and treatment of the dead, both of which are fairly similar to the practices of the Huron. Neutral funerary activities involved the temporary storage of bodies on scaffolds until permanent interment at the time of the Feast of the Dead. The ceremony of the Feast of the Dead, when performed by the Huron, consisted of gathering all of the remains of the dead every ten or twelve years and burying them together in a large pit or ossuary with the remains of the dead of other friendly villages, thereby reaffirming an alliance. It is assumed that the Neutral ceremony was similar, although it was never recorded by Europeans. The Relation discussed little more that is directly pertinent, except the location of the Neutral territory at that time. The Jesuits estimated that the northern border of this territory was about 120 miles directly south of St. Marie; the area occupied by the Neutrals then took up all of the Niagara peninsula. Three or four villages were said to be on the east side of the Niagara River; this is supported by White (White 1961, 21-31). Brebeuf and Chaumonot were again thwarted by rumors spread by the Huron, and their mission failed.

The relative neutrality of the Neutral lasted until A.D. 1649 when the Huron were attacked and finally dispersed by the allied Seneca and Mohawk from New York. The Seneca and Mohawk then decided, for reasons that remain unclear, that the Neutrals were a threat, and in A.D. 1650 a war consisting of a series of retaliatory attacks, each on a larger scale than the last, took place, ending in the demoralization and dispersion of the Neutral (Hunt 1939, 96-98). It is possible that the New York Iroquois feared an alliance between the Neutral and the French, who were on friendly terms. It seems clear, however, that the confusion which followed contact with Europeans was partially responsible for the tension and hostility which arose among the Iroquois in the 17th century. Many of the Neutral refugees were assimilated into surrounding tribes, including their conquerors.

Summary Of Archaeological Data On The Neutral

The following section summarizes the information pertaining to the Neutral that has been assembled from archaeological investigations of their sites. Included is a map showing the location of excavated sites and known distribution of Neutral settlement, and a brief discussion of aspects of Neutral culture, such as settlement pattern, subsistence practices and material culture. The main sources for this summary are Ridley's survey of Neutral archaeology to 1961 (Ridley 1961), several site reports (Wintemberg 1939; Wintemberg 1948; Jury 1941; Wagner et al. 1973) and E. Jury's booklet on the Neutral (Jury 1972). The results of recent work done by McMaster University, Hamilton, are not yet available.

A large portion of the Neutral sites which have been investigated by archaeologists are located in the area of the Grand River (see Fig. 1) in what was called the heartland of

the Neutral territory by the Jesuits. These include the Sealey, Walker, Donovan, Daniels, Fonger, and Moyer sites. Most of these particular sites are located in a limited area near Brantford and many of them are classed as historic, since European items have been recovered during excavation. A survey by MacDonald in 1961 located several other historic sites in the Grand River drainage area (MacDonald 1961). As can be seen from the map however, there are sites, including Southwold, Lawson, Clearville and Laidlaw that are located to the west of the Grand River and well within the Thames River drainage system. These western sites are all classed as prehistoric; in fact, those sites for which the most detailed work has been done are dated in the early 16th century, well before the historic period. It is possible that, since Europeans did not travel extensively west of the Grand River, they did not have a reliable indication of the western extent of Neutral territory during the historic period. It is more likely, however, that in historic times the area occupied by the Neutral did not extend as far west as it had earlier. Until further investigation of Neutral sites in the Thames River region is conducted, documentation of historic Neutral occupation of this area is impossible.

According to Wright the Neutral arose directly from their Middleport predecessors, represented in the area by the Middleport, Uren, and Pound sites, and retained a closer relationship with Middleport than did the Huron or Petun. Diagnostic Neutral traits which differentiated Neutral from Middleport were developed by A.D. 1400 (Wright 1966, 66). These included changes in ratios and distribution of pottery types, more complicated pipe and castellation complexes, different longhouse patterns, and the use of ossuary burial. The dominant pottery types for the Neutral period were Lawson Incised, Lawson Opposed, Niagara Collared with Pound

Necked, Ripley Plain, and Ontario Horizontal being represented in smaller quantities (Wright 1966, 86). Neutral ceramic pipes show a development through time in terms of further elaboration. The Iroquois Ring type is dominant in the early Neutral period, giving way to the Acorn type (Wright 1966, 86). Neutral longhouses were longer than Middleport structures in general, and the ends of the houses tended to be less rounded. Ossuary burial appears to have been practiced by the Middleport people to some extent; it was fully developed in Neutral times and associated with the Feast of the Dead, which has been described above. Further development of the Neutral includes a gradual shift in population density from west to east, the increase in size of sites through time, and increased emphasis on the choice of defensible sites (Wright 1966, 66, 91).

The information available on most of the excavated eastern Neutral sites is extremely limited. The only site for which settlement pattern data are available is the Moyer site.

Ridley describes several of the eastern sites (Ridley 1961) but he was restricted because his data came mostly from small-scale test excavations on these sites. Information on the western sites is available in Wintemberg's report on the Lawson site, Jury's preliminary report on the Clearville site, and test excavations conducted at the Laidlaw site, as well as the excavations at Southwold. The author is fortunate in being able to examine material from the Clearville site, the Laidlaw site, some Lawson material, and material from previous excavations at the Southwold site.

The Laidlaw site is located to the south of London, Ontario on the outskirts of the city. Test excavations conducted by W. D. Finlayson and the Archaeological Society of London in 1974 produced enough material to identify the site as Neutral but not enough for detailed analysis. The site

is estimated to be about three or four acres in extent and is located close to a stream (Finlayson 1976, pers. com.). No other information is available for the site.

The Clearville site is located near Lake Erie in Kent County, Ontario near the border between Kent and Elgin Counties, making it the most western site for which information is available. The site was partially excavated by Jury in 1939 and a report has been published (Jury 1941). It is situated in an easily defended position on a bank above a stream. Jury reports three occupation levels for the site, the earliest two yielding material identified as Middleport by MacNeish (MacNeish 1952, 13) but re-examination of the small number of rim sherds from the first two levels leads the present author to class all three occupations as being Late Ontario Iroquois. The site was recognized locally in the 19th century and it is reported that it once was surrounded by an extensive earthwork, since destroyed by cultivation. The material from the Clearville site has never been completely analyzed so there is little detailed information on the site.

The Lawson site is located in the extreme northwestern section of the city of London, Ontario. It covers about five acres and is located on a hill above the junction of two streams. The site was originally bordered on the east and west sides by earthworks some of which remain undisturbed. It was partially excavated in 1921, 1922, and 1923 by W. J. Wintenberg and a report on his investigations is available (Wintenberg 1939). The Lawson site is important to this study because it has been interpreted as being closely related to the Southwold site (MacNeish 1952; Wright 1966), and it has been used extensively in the interpretation of the prehistoric Neutral occupation of southwestern Ontario. The pottery has been analyzed typologically by MacNeish (MacNeish 1952) and the pipes have been examined by Wagner (Wagner et al. 1973). These data are discussed below in the chapter on artifacts.

Southwold: Reports Other Than From 1935 or 1976

The Southwold Earthworks have been known to local inhabitants as being a product of human activities for at least 150 years. There is mention of the site in the Canadian Illustrated Monthly of 1877, in which the earthworks are attributed to a non-Indian group of people who were "...far in advance of the Indians, as we have known them" (Canadian Illustrated Monthly [Montreal] 1877, 15:34). The site intrigued early archaeologists, such as David Boyle, who classed the site as being a very important example of Indian occupation of the area. Boyle mapped the site in 1890, and published a short report (Boyle 1891, 8-10) which describes the site and recommends its preservation as a landmark. He also mentions that the stream bed which runs through the western portion of the site was, at that time, fed by a spring which at the present is no longer flowing.

The Southwold Earthworks were reported again in 1893 by James Coyne (Coyne 1893, 22-34) who states that he had been acquainted with the site since 1867. His report includes mention of a midden mound, located to the southeast of the enclosed area, from which were recovered projectile points, fire-cracked rock, pottery sherds, fish scales, carbonized maize and animal bone fragments. Most of his report is devoted to a description of the visits of Daillon, and Brebeuf and Chaumonot to the territory of the Neutral, from which he deduces highly problematical historical identifications of several western Neutral villages. He identifies the Southwold Earthworks as the site of St. Alexis, the home of a powerful Neutral chief, and the capital of the Neutral territory, visited by Brebeuf and Chaumonot in 1641. This identification was later refuted by Wintemberg (Wintemberg 1935, 3) who had a better idea of the age of the site.

The site is reported again by W. R. Harris (Harris 1901, 25-36). Harris visited the site himself and took notes and

photographs (not included in the report). His information on the site was taken mostly from Boyle's and Coyne's report, and he reports on little of extra significance except for the fact that a plaster model of the earthworks was once located in the Archaeological Museum of Ontario, Toronto. Most of his report consists of a discussion of the attempts to establish Christian missions among the Neutrals in the 17th century; he is heavily influenced by his own clerical background.

Two preliminary reports were written on the excavations at the Southwold site in 1935, one by Wintenberg in 1935 and another by Jury in 1944 (Wintenberg 1935; Jury 1944). Both of these papers report observations made during the excavations; both are discussed fairly extensively below (see The 1935 Excavations At The Southwold Earthworks Site). An additional report was produced by Jury and published in 1946 by the Canadian Historical Review (Jury 1946). This paper was very brief and merely summarized the observations included in the earlier reports.

The rim sherds from the 1935 excavations at the Southwold Earthworks have since been examined in detail by MacNeish in 1952, and again by Wagner in 1973. MacNeish conducted a typological analysis of the rim sherds, the results of which are included below, and used the Southwold data, as well as that from the Lawson site, to form most of the basis for his chapter on Neutral-Wenro pottery types (MacNeish 1952). Wagner coded the rim sherds in terms of an attribute analysis for use in comparison with the data from the Moyer site, and includes the results of this comparison in his site report (Wagner et al. 1973).

Finally, J. V. Wright has used the information on Southwold in his synthesis on the Ontario Iroquois (Wright 1966) in which the Southwold site is included as one of the sites used as a basis for his statements on the Neutral.

Physical Description Of The Site

The Southwold Earthworks site is located on Lot 4, north side of the Talbot Road, east branch, Southwold Township, Elgin County, Ontario. It is two miles north of Lake Erie, and one mile southwest of Talbot Creek, which is the closest major drainage system (see Fig. 2). The land immediately surrounding the site is relatively flat, and is all under cultivation except for a small bush lot composed predominantly of beech and maple, located to the northeast of the site. The soils of the area around and including the site are classed as Haldimand silt loam, which is well drained and very suitable for cultivation. The subsoil of the area enclosed by the palisade of the site varies from heavy clay to sand, and the topsoil varies accordingly from clay loam to silt loam. The enclosure is roughly ovate in shape, with the long axis oriented almost exactly parallel to the magnetic southwest to northeast axis. This area measures 110 m. in length and 75 m. in width, and covers an area of approximately one hectare (see Fig. 3). It is relatively flat, well drained and under light beech and maple forest cover with trees ranging in diameter from 20 cm. to 100 cm. The elevation of the site varies from 212 m. to 213 m. above sea level. A small sand knoll rises to 214 m. above sea level immediately to the west of the site. The bed of a small stream runs along the southeastern perimeter of the site immediately inside the earthworks and parallel to the long axis of the site. The source of the stream was identified by Jury in 1935 (Jury 1946, 8) as being a small spring located just outside of the perimeter of the earthworks to the south of the site. Although this spring was not flowing in 1976, it was used to supply Wintemberg's camp in 1935, and could have represented a reliable source of water at the time the village was constructed. The stream bed is approximately three m. deep and 15 m. wide where it exits from the enclosure of the earthworks.

It seems likely that the size of the stream bed can be attributed to spring runoff and not only to the water from the spring.

Description Of The Excavations At The Southwold Earthworks Site

The 1935 Excavations

The first official investigation of the Southwold site was undertaken by W. J. Wintemberg of the National Museum of Canada between July 9 and September 7, 1935. Wintemberg produced a preliminary report (Wintemberg 1935) but unfortunately he died before he could complete a final manuscript. He was assisted during the excavations by W. W. Jury of the University of Western Ontario. After Wintemberg's death in 1939, Jury undertook to organize the notes, analyze the data, and produce a report on the investigations at the site. He prepared a preliminary map of the site, wrote a preliminary report (Jury 1944) and prepared a statement on the excavations which was published in the Canadian Historical Review in 1946. Both Wintemberg's and Jury's preliminary reports are important because, while Wintemberg was director of the excavations and had the experience to interpret the site, Jury acted as actual supervisor of the digging and includes several observations in his report that are omitted in Wintemberg's. These reports, a portion of the field notes, a few photographs, and the artifact assemblage recovered from the site are all the data that survives pertaining to the 1935 investigations.

The problems toward which the 1935 excavations were directed were: a) identification of the inhabitants; b) dating of the site; and c) the nature of the defenses (Wintemberg 1935, 1). In order to answer these questions Wintemberg undertook to excavate the entire level area within the confines of the earthworks, part of the stream bed which runs through the site, part of the earthworks themselves, and

a small area outside of the earthworks. For the area inside of the earthworks a grid system was established by setting in stakes in a ten ft. matrix. The grid was oriented such that grid north was 17° northwest of magnetic north. The stakes were numbered consecutively from southwest to northeast starting at the north end of the site. The resultant ten ft. by ten ft. squares were also numbered consecutively southwest to northeast beginning at the north end, but these numbers did not correspond with the stake numbers. Reference to such a grid system requires a complete grid map, one of which has not survived from 1935, but from field diagrams and notes, the present investigators have been able to reconstruct this grid system (see Fig. 4).

The crew consisted of five full-time people who acted primarily as supervisors, and from six to 25 men from the unemployment office in St. Thomas for periods of three days who acted as field workers. Wintenberg determined that the inhabitants of the site were Neutral, and he conjectured that the site was occupied in the late 16th century or early 17th century. He recovered no items of European design or influence. His investigation of the earthworks led him to believe that the inner earthwork had been constructed some time after the outer wall. The evidence for this assumption was the mixture of cultural material with the soil of the inner earthwork. He identifies a gap in the northeast section of the earthworks to be one of the main entrances to the village. He discovered post moulds that indicated that the earthworks were palisaded, and makes the following statements about the stockade.

Our excavations...revealed abundant evidence that the walls had been palisaded, although it was very difficult to find the post holes in some cases, especially where the walls were built entirely of either sand or clay. There were from two to four

rows of post holes in some parts of the walls and from one to three rows along the north part of the east bank of the ravine where there was no wall. Some of the double and triple rows were more or less parallel with the holes at more or less regular intervals apart; in others the arrangement of the holes was irregular (Wintenberg 1935, 5-6).

Wintenberg did not find enough post moulds in the interior of the village to identify habitation structures. He attributes this failure to the disturbance caused by 'pot-hunters'. He states that, for the most part, midden deposits were located outside of the village, with only minimal deposits within the earthworks. The 1935 excavations recovered some human remains, fragments of which were found in the midden deposits, a situation which Wintenberg suggests is evidence of cannibalism. One burial pit was discovered which contained very incomplete human remains. A skull was found in the bed of the stream. The artifacts recovered from the site include about 500 rim sherds, an assemblage of neck/shoulder and body sherds, a limited number of ceramic pipes and pipe fragments, chipped lithic artifacts, ground and rough stone artifacts, and a very limited number of bone artifacts. These artifacts were never analyzed by Wintenberg, but they have been available to the present investigators. With the reconstruction of the 1935 grid system provenience for the artifacts was re-established so that spatial analysis could be conducted for the material, thus making an analysis of the collection much more important than was possible previously.

As mentioned above, Jury's paper includes several observations which are not included in Wintenberg's report. He reports that outside of the palisade post moulds were found slanting in toward the earthworks. These posts were interpreted as braces supporting the stockade walls. Under the inner earthwork, a hearth floor was found with a layer

of ash containing pipe bowls and animal bone fragments. This is cited as evidence that the inner earthwork was constructed after the outer ring. Also supporting this interpretation was the discovery of a row of post moulds, also beneath the inner earthwork, which the investigators assumed to be the wall of a longhouse. The following statements are significant as well.

Outside the earthworks...a site was examined which was obviously a traders' camp where a building 20 ft. by 60 ft. had stood. Here were found specimens of pottery and other evidence of the Iroquois, Algonkians, and Petuns, or people of the Tobacco Nation, who came to trade with the inhabitants of the village (Jury 1944, 393).

Although the notes which Jury made about this exterior camp site, including a map of its location, have been lost, a photograph taken of the structure during its excavation allows an approximation of where it was located in the right of way which, at the present, leads to the site. Wintenberg also neglected to mention in his report the evidence in the creek bed which Jury was convinced represented a dam. He writes:

At the south side of the outer palisade where the stream or rill joined the depression at a branch or moat between the walls we located the remains of a dam. The imprints of the base and the outer edges of the earthen wall were plainly visible. In the bottom of the stream bed large sheets of partially decayed elm bark were lying. Silt and black muck covered this well constructed apron of a dam. Imprints of cross-ledges were discernable in the bank...(Jury 1944, 12-13).

This evidence, if it is such, of prehistoric technology is interesting, but the photographs and notes of this construc-

tion have since been lost, so that very little can be said about this dam. This feature was not reinvestigated in 1976.

The 1935 excavations at the Southwold site are very important generally, and in terms of the present investigation for several reasons. First, it is the first known instance of a research plan incorporating total site excavation in Ontario, and it remains as one of the few totally excavated Iroquoian sites in northeastern North America. Since the living floor of the site was at least partially undisturbed when Wintemberg undertook the excavations, incorporation of the 1935 and the 1976 grid systems allows the general correlation of living floor data with the settlement pattern data for the whole site. Second, the investigation of the earthworks was conducted in much more detail in 1935 than in 1976, allowing a more complete interpretation of the palisade. Third, the information that is available from 1935 concerning native activity outside the earthworks is important in the total interpretation of the site. Fourth, the quantity of artifacts recovered in 1935 was by far larger than that recovered in 1976. Fifth, Wintemberg's excavations produced a small amount of pre-Iroquoian pottery which suggested the presence of an earlier component on the site which appeared to be assignable to the Saugeen culture occupation of southwestern Ontario.

The 1976 Excavations

The 1976 excavations at the Southwold site had the following objectives:

- (1) to determine the nature of the occupation within the earthworks;
- (2) to determine if there was any native activity outside the earthworks and;

(3) to determine the nature of the earthworks.

In defining a research strategy to pursue these objectives the only information available about the Southwold site was a preliminary report on the 1935 excavations by Wintenberg (1935) and a brief summary on this work by W. Jury (1946). Unfortunately, all field notes and other documents from Wintenberg's 1935 excavations were not available as it was believed that all of these had been destroyed after Wintenberg's death (Wright 1976, pers. com.). Thus an original research strategy had to be formulated on the basis of minimal knowledge of the site. It was assumed that a portion of the site area had not been disturbed and that undisturbed deposits would be available for excavation.

The 1935 excavations established that the major component at the Southwold site was a prehistoric Neutral occupation. In addition, a small quantity of Saugeen culture ceramics were recovered which suggested the presence of a second component which preceded the occupation by the Neutral.

In order to pursue the stated objectives, a research strategy was proposed which involved the detailed excavation of portions of the undisturbed deposits to determine the nature and extent of the two components at the site. In particular, it was hoped that information could be gathered about activity areas both within and outside house structures and other features on the site.

The excavations were begun in June 1976 with a crew of two persons. The first few days were spent excavating nine one metre square test pits within the earthworks and 11 50 cm. square test pits outside the earthworks. These were dug to determine the nature and extent of the undisturbed deposits on the property owned by Parks Canada.

After an examination of the profiles all test pits both within and outside the earthworks, with the assistance of Dr. Roger King, a pedologist in the Department of Geography,

The University of Western Ontario, it became apparent that most, if not all, of the deposits within the earthworks had been extensively disturbed by cultivation and/or previous excavation. All profiles showed a disturbed soil horizon (Ap) above the undisturbed subsoil (see Fig. 9).

On the basis of this information, the research strategy which was dependent on the presence of undisturbed deposits, had to be abandoned and new strategy had to be substituted. Since it became impossible to determine the nature of the occupations of the site, either within or outside the earthworks, by detailed excavation of living floor deposits or middens, the only alternative means of investigating these occupations was to devise a strategy which would examine the remains of house structures and associated features in the undisturbed subsoil.

It was impossible to completely excavate the site, so it was decided that the only way to recover a significant sample of data was to employ the established method developed for the investigation of Iroquoian sites of cross-trenching the site and delineating house walls. To increase the rate of data recovery, a bulldozer was employed to clear the topsoil off of three trenches inside the earthworks to locate house structures, and one trench outside and to the west of the earthworks to detect any external activity. The walls of several of the structures located in the interior were trenched, a five m. cross-section of one structure was excavated, and one structure was completely excavated except for part which was under a tree. The trench outside of the earthworks did not uncover any native activity. Two trenches dug by hand, due to the unavailability of power equipment, to the south of the earthworks uncovered what appeared to be basal midden deposits. A one m. wide trench was cut through the earthworks at the south end of the site to give a cross-section of the mounds and to determine, if possible, how they were constructed (see Fig. 7).

Very few artifacts were recovered during the 1976 excavations. This is due largely to the fact that the overburden on most of the area excavated had already been dug by Wintenberg's crew. Test screening of the disturbed living floor over one of the structures yielded almost no cultural material, which contributed to the decision to use power equipment. It was discovered during excavation, however, that undisturbed features inside of structures also yielded very little artifact material.

In 1976, a total of 103 five m. squares were either wholly or partially excavated (see Figs. 5, 6). An estimate of the actual area excavated is about 1,150 square m. Since the area encompassed by the rings of the earthworks is approximately 10,000 square m. in extent, roughly 10 per cent of this area was excavated, plus excavations conducted outside the earthworks.

The 1976 excavations produced only a limited amount of data from the Southwold site, and most of this pertained to the house structures. While these data were being analyzed, Dr. Wilfrid Jury, Honorary Curator of the Museum of Indian Archaeology, The University of Western Ontario, produced a box of notes from Wintenberg's 1935 excavations at the Southwold site. These had been sent to him by the National Museum of Canada after Wintenberg's death and were used by Jury to produce his summary report on Wintenberg's excavations. In addition, Jury had prepared a map of the site and a manuscript on the excavations.

The notes which Dr. Jury produced contained information on the nature and extent of the excavations by Wintenberg. A preliminary study of these revealed that Wintenberg had dug almost all of the site located within the earthworks. The notes also appeared to be complete enough to allow the reconstruction of the grid system used by Wintenberg.

Accordingly, the contract negotiated with Parks Canada was renegotiated to allow the production of a map showing the extent of Wintemberg's excavations and the artifacts recovered by Wintemberg.

The Approach to the Analysis of the Available Data

The analysis of the data available from 1935 and the information recovered during 1976 was performed by the author with the aid of two part-time laboratory assistants. A computer code developed by the Museum was used to obtain the statistics for the rim sherds data; these data were processed at the University computing centre by a CDC Cyber 73/14 computer with the use of the Statistical Package for the Social Sciences (Nie et al. 1975). An account of the methods and procedure used in the analysis is provided at the beginning of each subsection in the next two chapters.

In order to prepare for the analysis of the data, the material from Wintemberg's 1935 investigations had to be organized. This material consisted of an assortment of notes, draft reports, maps and photographs. The notes included references to block excavations, post mould locations, investigation of the earthworks and the stream bed, recovered material, the grid system, and exterior investigations. The maps were very rough references to the grid location and the photographs were of the general excavations.

It was necessary to accurately reconstruct the grid system employed in 1935 to provide provenience for the cultural material recovered. This reconstruction was rendered very difficult by the incompleteness of the notes and maps, and by the nature of the grid system itself. For the purposes of the excavations in 1935 a ten ft. grid was established by setting in stakes numbered consecutively from the northwest corner. The ten ft. square blocks created by this grid

were also numbered consecutively from the northwest corner, but there is no continuous correlation between the stake and block numbers. The information from the recovered material used to reconstruct the grid consisted of two rough and incomplete maps of the stake locations; references in the 1935 catalogue to block numbers bordering the ravine and the earthworks; notes on post mould locations which included block numbers and the corresponding stake numbers for approximately 25 per cent of the site; notes on measurements across the earthworks which include the stake numbers with which these measurements were in line; the relationship of the 1935 grid orientation to magnetic north. The diagrams of the site were not accurate with respect to topographic features. In order to facilitate the reconstruction of the grid, a correct topographic outline of the site was drawn with locations of trees, and a ten ft. scale grid was attached to this map in the orientation of the 1935 grid. The stake locations for the north half of the site were readily established with the aid of the two rough grid maps. The stake locations for the south half of the site were more difficult to establish as there were no direct references or diagrams. In order to reconstruct this part of the grid it was necessary to rely on notes which specified stake locations next to the stream bed or next to the earthworks; references to adjacent stakes, and references to stakes that were in line diagonally. Enough relevant correlations between the block numbers and stake numbers were available to fill in all of the blocks, leaving appropriate spaces for trees. The final map (Figure 4) is considered to be accurate with very few inconsistencies.

Settlement Pattern

Introduction

The primary purpose of the 1976 excavations at the Southwold site was to determine the nature of the settlement within the enclosure of the earthworks. Since the living floor deposits of this area had been completely disturbed by pot-hunters and previous excavation, the 1976 investigators had to rely almost solely on what settlement pattern data could be recovered from limited test excavations. Wintemberg expected to recover data on structures in 1935, but was unable to do so. In the preliminary report on his excavations he states:

It was hoped that it would be possible to locate the holes of the wall posts of houses and thus get an idea of the number, dimension, and location of the dwellings which must have stood within the enclosure, but unfortunately previous digging by "relic" hunters had destroyed most of these evidences, especially in the south half of the site. Only a few long rows of post holes therefore could be discovered (Wintemberg 1935, 6).

During the 1976 excavations, however, it was found that post moulds and features were relatively easy to recognize even in the areas of the site where roots or heavy clay made excavation difficult. Once the disturbed topsoil was removed, the depredations of "relic hunters" were found to be fairly limited, even in the southern half of the site. The inability of the 1935 investigators to recover settlement pattern data within the enclosure of the earthworks must be attributed to the nature of the crew--labourers with no archae-

ological experience at all who were replaced every few days without having time to learn what they were looking for. In the surviving field notes there are locations for several hundred post moulds, but most of them are palisade posts that were associated with the earthworks. The post moulds located inside the enclosure are generally randomly spaced although a few walls were present which correspond to structures located in 1976.

The settlement pattern data are discussed under the following sections. First, the earthworks and palisade are discussed using both the 1935 and the 1976 data. Second, the basic descriptive data for each structure located on the site in 1976 are provided. Third, the evidence for activity external to the earthworks is discussed employing data mainly recovered in 1935. Fourth, the settlement pattern data as a whole is interpreted in terms of structure construction and location, population, and defensive measures.

Earthworks and Palisade

The earthworks were investigated in both 1935 and 1976 with the intent of determining the method and means of construction, whether or not the earthworks were stockaded and, if so, the nature of the stockade, and the temporal relationship between the two walls.

The investigation of the earthworks in 1935 was much more extensive than that of 1976; two cross-sections were dug through the walls, and several sections of the earthworks were desodded in order to obtain data on stockade post moulds. In 1976, there was only time to dig one cross-section through the earthworks in one section of the site, and test pits in the inner earth wall in another section. The combination of the data from both field seasons, however, allows interpretation, although somewhat incomplete, of this

important aspect of the occupation of the village.

The earthworks consist of two low mounds of soil which form the perimeter of the village. The outer earthworks surround the site entirely except for the openings where the stream enters into and exits from the enclosure. The inner earthworks surround the site entirely except for a space of about 45 m. on the southwest to west perimeter of the site where the stream cuts into the area where this inner wall would have been if it was to remain parallel to the outer wall. Wintenberg's excavations found evidence of rows of post moulds on the east bank of the stream in the area of the break in the inner earthworks. This stockade would have completed the double palisade surrounding the site entirely. During the 1976 excavations a one m. wide trench was dug which cross-sectioned the earthworks in a well preserved portion at the southeast end of the site. A detailed profile of this trench was drawn to see if it would be interpreted in terms of how the earth walls were constructed and their temporal relationship to each other. The profile (see Figure 7) lends itself well to such an analysis. The original soil level, indicated by line A, is readily discernable, and shows that the surface was once fairly flat. Both walls of the earthworks consist of a lens of subsoil (B and C) on top of the original soil level and capped by a layer of topsoil (D and E). Both walls are roughly symmetrical from a center point. The relative size of the walls can be computed by comparing the amounts of soil removed during the excavation of the trench from each wall above the original soil level. Such a comparison indicates that the inner wall is somewhat larger than the outer wall at the point in the earthworks where the cross-section was made, although this difference is not too great. Examination of the rest of the earthworks indicates that the inner and outer walls are of relatively the same size at all points around the site.

As can be seen from the diagram the soil for the earthworks was taken from the trench between the walls and from outside the outer wall. It can also be seen that the subsoil lens C is substantially different from lens B in that it is larger, of a different type of soil, and is more homogeneous. This difference can be interpreted if it is postulated that the outer earthworks were built first using the topsoil and some subsoil from the two trenches, and the inner earthworks were constructed using topsoil but a lot more subsoil from the trench between the walls. There is, however, no evidence as to the length of time between the construction of the outer wall and the inner wall.

Evidence was also found in the cross-section trench for the stockade which rose above the earthworks. Post moulds were located in the original subsoil layer, indicating that the stockade was erected prior to the construction of the earthworks. The outer earthworks had a single row of stockade located in the center of the earth wall. The inner earthworks had two rows of palisade with one row located in the center of the wall and the other row located about 60 cm. toward the outside of the wall. All of the post moulds extended vertically into the subsoil and terminated with a point. The diameter, depth from the surface, and depth into the subsoil of each post mould are summarized in Table 1. There is no substantial difference between any of the rows of either inner or outer stockade when these data are considered. All of the diameters range between seven cm. and ten cm. and all of the depths into the subsoil range between eight cm. and 13 cm. The difference of the outer row of the inner wall in terms of depth from the surface occurs because this row is located away from the highest part of the earthworks. Wright (Wright 1974, 12-13) suggests that a palisade with posts of base diameter between two and four in. (five and ten cm.) would range in height between 12 ft. and 16 ft.

(3.7 m. and 4.9 m.). If the average diameter of the post moulds in the stockade is taken as 8.6 cm., then a suggested height for the stockade would be between 4 m. and 5 m. above the earthworks at this point in the palisade. The spacing of the post moulds, however, varies between the rows with the innermost of the three rows being the most dense and the outermost being the least dense.

In the north section of the earthworks, two one m. square test pits were dug into the interior slope of the inner earth wall. The profiles of these test pits consist of a midden cap over a layer of subsoil which in turns covers a layer of topsoil which is the original soil level (see Figure 10). These profiles indicate that, at this point in the inner wall, midden material was dumped onto the wall after the lower part of the wall had been constructed with earth from the trench between the inner and outer walls. Whether the use of midden material to increase the height of the wall was part of the original construction of the inner earthworks or not could not be determined.

It is apparent that Wintemberg and Jury made two cross-sections through the earthworks, and removed the topsoil from sections of the earthworks to locate post moulds. With reference to one of the cross-sections Wintemberg comments:

A trench dug across the best preserved and highest portion of the walls on the east side of the enclosure, showed the composite nature of the earth of which they were composed. In a few places in the inner wall, the soil was a mixture of clay, sand, loam, and ashes and black soil containing animal bones and artifacts, which suggest the probability that the inner wall was constructed some time after the outer one (Wintemberg 1935, 4).

Although the trench dug through the inner wall in 1976 yielded no cultural material and, therefore, does not verify

the theory that the inner wall was built some time after the outer wall, the 1935 excavations apparently recovered a substantial amount of data which would verify this belief.

Jury states:

On examination, the soil of the outer wall proved to be of solid earth while that of the inner wall yielded ashes, pottery, and other camp debris. From this we concluded that the outer walls had been built first and the second, or inner walls were erected at a later date by scraping against them the surface of the site. Substantiating this belief was the discovery of a fireplace with a stratum of undisturbed ashes, pipe bowls, and animal bones directly under the inner wall. In another section, imprints of post holes could be followed, plainly the continuation of a line of posts that marked the location of a longhouse. The inner wall in some places was partly built of ashes (Jury 1946, 392).

The amount of cultural material and evidence of activity which was recovered from within and under the inner wall in 1935 indicates that this wall must have been constructed some time, perhaps even years, after the outer wall.

The 1935 excavations recovered a considerable amount of data concerning the stockading of the village. A remapping in 1976 of Wintemberg's post mould data demonstrates that large sections of the earthworks were investigated and hundreds of post moulds were located. Wintemberg states:

There were two to four rows of post holes in some parts of the walls and from one to three rows along the north part of the east bank of the ravine where there was no wall. Some of the double and triple rows were more or less parallel, with the holes at more or less regular intervals apart, in

other words the arrangement of the holes was irregular (Wintenberg 1935, 5-6).

Jury reports that the post mould diameters ranged between four in. (10.2 cm.) and eight in. (20.5 cm.) in diameter on both the inner and the outer walls. The data correlates with that recovered in 1976 giving a composite picture of the entire village surrounded by a palisade consisting of from one to four rows of stockade in either wall with the earthworks serving as a foundation. It appears that the inner wall was more consistently stockaded with multiple rows than the outer wall. Jury also reports that:

In the corner of the earthworks or wherever a short bend occurred, we located post imprints, sloping towards the palisade. These had undoubtedly been left by the poles that acted as braces to strengthen the palisade. These braces also occurred at intervals along the inside of the inner palisade wall (Jury 1944, 15).

As can be seen from the map of the site, the only substantial openings in the walls are located where the stream runs in and out of the enclosure and at a point in the north section of the earthworks. This north opening was identified by Wintenberg as being an entrance to the village. The earthworks of the outer wall are out of alignment on either side of this opening, and the gap in the inner wall is offset from that in the outer wall.

These openings in the outer and inner walls were both approximately one m. wide. Wintenberg's report does not comment on the nature of stockading in the vicinity of this opening. Several other openings occur in the earthworks, but these all appear to have been made subsequent to the occupation of the village but the reason for these remain unknown. One opening, at the southeastern end of the enclosure, was identified by local inhabitants as having been made recently to facilitate logging activities within the enclosure.

Structures

Introduction

Since Wintenberg's excavations failed to yield any information about structures within the enclosure of the palisade, as much data as possible about this aspect of the village was sought during the 1976 excavations. The procedure employed to collect this data within the limitations of the test nature of the excavations is as follows. The nine small test pits which were excavated inside the earthworks to determine the nature of the disturbance of the overburden were also placed to uncover indications of structures. A test pit in the north section of the site revealed post moulds and a hearth floor. This pit was expanded into two five m. squares in order to locate house walls. One house was completely cross-sectioned by these squares, and two more house walls on either side of this structure were revealed. Since all three of the houses were oriented along a northwest to southeast axis a five m. wide test trench oriented northeast to southwest was excavated across the northern portion of the enclosure to cross-cut as many houses as possible, assuming a general northwest to southeast orientation of structures. This trench revealed several other structures which were all oriented along a northwest to southeast axis. Several of the walls of these structures were traced to the south of the test trench to determine their extent. Following the same rationale as for the first test trench another trench was excavated southeast of the extent of the longest house in the central portion of the site, and a third trench was located across the southeastern portion of the enclosure. Both of these trenches cut across structures, some of which were oriented in a northeast to southwest direction. One more house was discovered to the northwest of the first test

trench by means of a small trench. This house was chosen for complete excavation and was cleared completely. Two trenches were excavated outside of the earthworks to determine if there were any structures exterior to the enclosure. See Figure 4 for the exact location of all the trenches.

Evidence for a total of 18 structures was recovered during the 1976 excavations. Detailed data on the dimensions, orientation, end shapes, and overlapping of each structure are supplied in Table 2. In the following section, each structure is discussed separately in terms of these data. This is followed by a discussion of the entire pattern of structure location, dimension, and construction.

House 1

General Observations

House 1 was located in the northern section of the site and was oriented parallel to the long axis of the site. About 25 percent of the structure was excavated, a five m. cross-section of the house was dug, and key parts of the house wall were traced by trenching. The southeast end of the house wall was completely uncovered by Test Trench 1, revealing it to be relatively flat and with slightly bevelled corners. The northwest end of the house abutted the inner earthworks, and was not excavated beyond the north corner. Only one opening into the house was located. This occurred in the corner of the end wall and was formed by the overlapping of the wall on both sides leaving an opening 60 cm. and facing directly toward northeast. This was the only occurrence of an overlapping doorway that was found on the site. The length of the house (23.3 m.) was average for this site, but it was one of the widest of the structures for

which width was attainable (6.3 m.). The width appeared to remain constant for the entire structure.

Post Moulds

The post moulds of House 1 were relatively easy to see except for areas of root disturbance, the subsoil being sandy. None of the wall post moulds had any high degree of ash or charcoal in the contents. The post moulds that made up the side walls of the house were staggered and set fairly close together (6.3 per m.) with an average diameter of 7.0 cm. and a range of from five cm. to 12 cm. The post moulds in the corners and in the southeast end were much closer together (11.7 per m. and 10.0 per m. respectively) and were also smaller in diameter (6.0 cm. and 5.1 cm. respectively with ranges of from five cm. to eight cm., and from four cm. to eight cm.). This indicates that smaller saplings set very closely together were used to build the ends as opposed to the sides of the structure. The most unique characteristic of House 1 was the occurrence of interior house walls parallel to the side walls on either side of the house. These walls were exposed by the five m. cross-section of the house. On the southwest side of the structure there was a single wall with post moulds averaging 7.0 cm. in diameter with a range of from five cm. to eight cm. and evenly spaced in a straight line (2.0 per m.). This wall was located 60 cm. from the west side wall. On the east side of the structure there was a double row of posts located on an average 40 cm. and 7.5 cm. respectively from the northeast side wall. The most northeasterly of these rows consisted of post moulds spaced evenly on an average of 40 cm. apart and had an average diameter of 8.2 cm. with a range of from seven cm. to nine cm. The inside row consisted of post moulds 10.5 cm. in diameter with a range of from seven cm. to 12 cm., and

spaced evenly apart except for a few cases where post moulds were located side by side. A third interior house wall was revealed on the northeast side of the house at a distance of 160 cm. from the northeast side wall. This row consisted of post moulds averaging 8.2 cm. in diameter with a range of from seven cm. to nine cm., unevenly spaced (3.5 per m.) and staggered. The third wall coincided with a row of interior house support posts. Rows of interior house support posts occurred on both sides of the house at an average distance of 130 cm. from the side walls. On the southwest side of the structure these support posts were located in pairs 145 cm. apart and average 13 cm. in diameter with a range of from 12 cm. to 14 cm. The four post moulds investigated ranged from 27 cm. to 50 cm. deep with a mean depth of 35.75 cm. below the subsoil level, and contained ash, charcoal, and artifacts. The row was not parallel to the side wall; one pair of post moulds was 110 cm. from the wall and the other was 140 cm. from the wall. On the other side of the house interior support posts occurred singly in a row 150 cm. from the east wall and parallel to it. Two of these posts were directly opposite the pairs on the southwest side; a third post was slightly out of line and did not conform to the relative spacing of the others. These support posts were consistently larger than those on the west side of the structure, averaging 25 cm. in diameter with a range of from 21 cm. to 29 cm. in depth with a range of from 17 cm. to 45 cm.

Interpretation of these interior house walls was rendered difficult by the fact that only five m. of each was exposed and because there were no other examples of this pattern on the site. The rows of support posts were obvious bunk lines which would allow for sleeping platforms approximately 125 cm. wide on either side of the house. The line of smaller posts on the west side of the house, and the double line of posts on the east side of the house could possibly have been bunk

supports. The row of posts which coincides with the support posts on the eastern side of the house were possibly a reinforcement of the bunk line. Since none of these interior house walls had the characteristics of house walls, that is, they were not staggered and they were not set very closely together, it does not appear that they were the result of extensive rebuilding or overlapping of houses. It appears more likely that these rows represented an aberrant form of house construction about which little more can be said because of lack of data.

In the interior of the house isolated post moulds which were revealed in the five m. cross-section of the house did not occur in recognizable clusters, although they were more concentrated in the central portion of the structure than near the periphery. The centrally located post moulds had an average diameter of 6.2 cm. with a range of between four cm. and 11 cm. The more peripheral post moulds had an average diameter of 6.5 cm. with a range of between four cm. and 11 cm. indicating little difference between the two locations. These post moulds most likely represented cooking and drying racks which would be set up and removed continuously. There was no clustering around the single hearth that was uncovered.

Features

As mentioned above, only one hearth floor was discovered for House 1. This feature was located centrally (3.25 m. from each side wall) and was disturbed by shovelling from previous excavators. The hearth floor was ovate in plan shape and relatively small (47 cm. by 36 cm.). It was undoubtedly larger when it was in use, but disturbance by previous excavators had removed all of the top section. No other features were discovered within the immediate vicinity of the hearth floor.

A total of seven other cultural features were uncovered in the excavated section of House 1, all of them pits. These features can be divided into two categories according to plan and profile shape. The most predominant category (five of the seven pits) was ovate plan shape with irregular profile shape. The relative sizes of the pits were fairly variable. The depths of the pits did not vary directly with the lengths and widths; that is, the largest pits in plan were not necessarily the deepest. The statistics for the features of House 1 are summarized in Table 3. The pits were generally not centrally located; only the larger circular feature was located in the center of the house. Five of the seven pits were located in a cluster southwest of the center of the house, and three of these were located in the bunk line of support posts. One ovate pit was located under the sleeping platform on the east side of the house. The three pits in the bunk line on the west side were the deepest, averaging 31 cm. in depth with a range of from 29 cm. to 33 cm., or twice as deep as any of the other features. Two of these pits were also the most complicated in fill and contents. The composite nature of the layering in these pits indicates repeated use of the features for storage or garbage disposal. The profiles of the other features did not indicate evidence of repeated use. The occurrence of cultural debris in the pits in the bunk line was much higher than in the others. This debris included pottery fragments, bone fragments, chipping detritus and pipe fragments, indicating that these pits were finally used for garbage disposal while the others were used primarily for storage.

House 2

General Observations

Very little of House 2 was excavated. The northeastern wall of the house was discovered in conjunction with the five m. cross-section of House 1. The southwestern wall was revealed by trenching, and was exposed for a space of seven m. Extreme root disturbance from nearby trees prevented further tracing of the walls. The structure was located in the northern section of the site, and was oriented parallel to grid north. No data was recovered for length of the house, for doorways, or for end shape. The width of the house was 5.5 m. None of the interior of the house was excavated so there are no data on features.

Post Moulds

The post moulds of the east side wall of House 2 were relatively easy to see in the sandy subsoil. This wall consisted of staggered post moulds which were closely spaced (seven per m.). The western wall, where easily discernable, also consisted of staggered post moulds, but these were not as closely spaced (four per m.). The average diameter of the post moulds was 6.2 cm. and ranged between four cm. and nine cm. There were no data recovered for interior support post moulds or interior isolated post moulds.

House 3

General Observations

House 3 was located in the northern section of the site and

was oriented parallel to the long axis of the site. It was cross-sectioned by Test Trench 1, which was four m. wide at this point, and was also intersected by the five m. cross-section of House 1. Portions of the house wall were traced to obtain the length of the structure, such that a total of about 15 percent of the structure was excavated. House 3 was 26.5 m. long and 6.5 m. wide. No openings were discovered in the sections of the walls that were excavated, and data on end shape was not revealed.

Post Moulds

The wall post moulds of House 3 were consistently staggered and set closely together. The average diameter of the side wall post moulds was 6.9 cm. with a range of between 5 cm. and 11 cm. The average density of these post moulds was 6.6 per m. There were no interior house walls, but bunk lines of large support posts were visible on both sides of the house. On the west side of the house a single pair of support posts with diameters of 15 cm. and 32 cm. and depths of 55 cm. was located 170 cm. from the west side wall. The bunk line on the east side consisted of two separate support posts 2 m. from the east side wall and 310 cm. apart. These post moulds had diameters of 25 cm. and 30 cm. and both had depths of 47 cm. The bunk lines defined by these support posts are relatively wide, leaving a central corridor only 2.7 m. wide. The interior house isolated post moulds were concentrated generally in the center of the excavated section of the structure, with a cluster located in the center fairly close to a group of features. The post moulds in this cluster all had a diameter of 5 cm. whereas those in the rest of the area had diameters ranging from 4 cm. to 8 cm. Another cluster of post moulds occurred under the northeast bench area with diameters ranging between 5 cm. and 8 cm. The

cluster in the center of the house most likely represents a set of posts used for drying and cooking. With the bench areas as wide as they are, concentration areas in the central corridor would be expected. The post moulds under the sleeping platforms would be supports for the benches, but with the limited amount of data available why they were clustered is not clear.

Features

All but one of the features in the excavated section of House 3 were located in a group in the central corridor of the structure. The only evidence of a hearth floor occurs in conjunction with one composite feature located slightly off center with reference to the side walls. This feature consisted of a bottom layer of topsoil, a middle layer of fired soil, and a top layer of ash and charcoal. It appears that this feature was produced by the digging of a basin shaped depression which was partially filled with topsoil and then used as a hearth floor. The feature was 48 cm. long, 40 cm. wide and 16 cm. deep. Close to the hearth floor were two other features which were most likely associated with it. One of these features was a large (155 cm. by 88 cm.) and extremely shallow cap of fired soil and ash with no profile development and an irregular plan shape; it was probably spillover from the hearth floor. The other feature consisted of an irregularly shaped pit 30 cm. long, 25 cm. wide, and 70 cm. deep accompanied by a very shallow layer of the same material. The fill of both parts of the feature consisted of mottled topsoil, subsoil, fired soil, and ash. The feature was also most likely an ash disposal pit. The only other feature in this part of the house was a small circular pit 126 cm. in diameter with a depth of 16 cm. which was located just inside the bunk line on the northeast side of the house.

House 4

General Observations

Only the northwest end of House 4 was revealed by Test Trench 1. It was located in the northwest central portion of the site and was oriented parallel to the long axis of the site. The length was indeterminate; the width was 6.0 m. at the northwest end. The end of the house was fairly flat with assymetrical corners, one being bevelled while the other was rounded with an anomalous opening 15 cm. wide where the wall overlaps. There is a doorway 65 cm. wide in the north-east side wall just before the wall begins to turn for the corner.

Post Moulds

The pattern of post mould distribution for House 4 varied for the two sides of the structure. The post moulds of the north-east side wall were staggered and set closely together (7 per m.) with an average diameter of 6.9 cm. and a range of from five cm. to nine cm. The post moulds of the southwest wall were less dense (5 per m.), had a smaller average diameter (6.0 cm.) with a range of from four cm. to eight cm. and were not as consistently staggered. The post moulds of the corners were also assymetrically arranged. The density of the post moulds in the north corner was much greater than in the west corner (10 per m. as opposed to 5 per m.) and the average diameters of the post moulds were larger (5.8 cm. with a range of from five cm. to eight cm. as opposed to 4.5 cm. with a range of from three cm. to six cm.). This difference can be explained if soil types are taken into account. The southwest wall and corner ran through a section of fairly heavy clay which would be difficult to set many posts or

large posts into the ground. The soil on the east side of the house was relatively sandy. The general pattern is similar to that of House 1; larger posts were used for the walls than for the ends and corners, but the posts in the ends and corners were set more closely together.

There were two interior house support post moulds located directly across from each other on either side of the structure, 135 cm. from the side walls and 2.75 m. from the end of the house. They had diameters of 20 cm. and 18 cm. These posts most likely represent the ends of bench lines along the sides of the house, which leaves a compartment in the end of the house 2.75 m. long. A third interior support post was located in this compartment on the northeast side toward the center. None of these post moulds were excavated so the depths are not available.

Interior house isolated post moulds were very few in this structure. None were located in the center of the house. There were post moulds located between the bench row support posts and the house walls on either side of the house with an average diameter of 6.0 cm. and a range of from four cm. to nine cm. These may have been situated to support the ends of the sleeping platforms.

Features

One hearth floor was uncovered in the end of House 4. Its position is interesting because it was located only 2.5 m. from the end of the house and was directly between the two support posts which marked the ends of the bench rows. This example of positioning of hearths occurred in two other structures and will be discussed in the summary section. The hearth floor was ovate in plan shape and had dimensions of 80 cm. by 64 cm. It was located in a large dark root disturbance in the center of the house with reference to the short axis of the structure.

Three other features were located in the end of House 4. Time did not allow the excavation of any of these features so that full data are not available for them. Two were ovate and relatively small (35 cm. by 30 cm. and 36 cm. by 25 cm.). The first feature was located under the sleeping platform on the west side of the house and adjoins the support post. The second was located on the west side of the hearth floor. The third feature was irregular in plan shape with dimensions of 95 cm. by 50 cm. and was located in the end compartment of the house.

House 5

General Observations

House 5 was located in the north section of the site and was oriented in a southwest to northeast direction. Only the walls of the structure were traced, but it is plain that it was the most anomalous structure located in the site. The side walls were not parallel to each other and no ends were found for the structure. It was the only structure in the northwestern half of the site which was not oriented more or less parallel to the long axis of the site. It was also the shortest structure for which length was determined on the site, being only 8.0 m. long. The width of the structure ranges from 4.85 m. to 5.5m. None of the inside of the structure was excavated so that there is no information on internal features.

Post Moulds

The north wall of the structure, which was uncovered in Test Trench 1, was located in sandy soil such that the post moulds

were fairly easy to see. The density of the post moulds of the north wall (5 per m.) was much greater than the density of the south wall (2 per m.) which was located in clay. The mean diameters of the post moulds were 6.4 cm. with a range of from five cm. to nine cm. for the north wall and 5.8 cm. with a range of from four cm. to seven cm. for the south wall. There was no charcoal or ash in the post moulds.

Occupancy

It does not appear that House 5 was a living structure. It is possible that this structure was a 'guest house' in which visitors to the village were assigned. In her Ethnography of the Huron, Tooker states:

As the Huron were circumspect about their own war plans, they allowed people with whom they had not broken entirely to come and go in the country, but assigned them to special houses to which they had to retire; if they were found elsewhere, they would do them grievous harm (Tooker 1964, 28-29).

Although this was a practice of the Huron, it is quite possible that it was also practiced by the Neutral. The structure was located very close to the entrance of the village, and, therefore, visitors would not get a chance to see the settlement plan of the entire village.

House 6

General Observations

House 6 was located in the west section of the site and was oriented parallel to the long axis of the site. It was intersected by Test Trench 1 in a place where this trench was

only two m. wide. Sections of the southwest wall were traced to get the length of the house (49.5 m.). The width was 5.8 m. The southeastern end of the structure was mostly obscured by a large tree. Enough of the north end of the structure was traced to demonstrate that it had a bevelled corner. One opening in the walls of the structure was revealed. This occurred in the southwest side wall one-third of the length of the house from the north end. It is reasonable to expect that doorways would occur in the side walls of a structure as long as House 6. This structure overlaps extensively with the southern portion of House 9.

Post Moulds

The post moulds of the west side wall of House 6 vary considerably in density, ranging from six per m. in the southwestern part of the structure to three per m. in the northeastern section. The post moulds are, for the most part, staggered and the average diameter (6.4 cm.) is consistent for the length of the wall, with a range of from four cm. to nine cm. The post moulds in the one corner that was excavated are set in a straight line with a density of five per m. and an average diameter of 5.8 cm. with a range of from five cm. to six cm. Enough of the end wall post moulds at the northwest end of the structure were excavated to give an average diameter of 6.5 cm. with a range of from five cm. to eight cm. and a density of 7.8 per m. The corner post moulds are interesting because they are set in an exact straight line and because they are set off from the side walls and the end wall by spaces.

No interior support post moulds were located for House 6, and only five interior isolated post moulds were revealed. Of these, four were grouped by the west wall, and one was in the center of the house. The average diameter of these post moulds was 5.5 cm. with a range of from four cm. to nine cm.

Features

A hearth floor was the only feature that was uncovered in House 6. It was located off center (3.3 m. from the west wall and 2.5 m. from the east wall). It was ovate and fairly large (100 cm. by 75 cm.).

House 7

General Observations

House 7 was located in the west section of the site and was oriented almost exactly parallel to the long axis of the site. It intersected extensively with House 9. It was cross-sectioned by Test Trench 1, the southwest side wall was almost totally traced, and the northeast end wall of the structure was totally excavated. This end of the house had rounded corners and a flat end wall. There was a doorway 1.0 m. wide exactly in the center of the northwest end wall. House 7 was one of the larger structures on the site, being 46.5 m. long, and 6.25 m. wide. The east corner of the structure was intersected by Test Trench 2.

Post Moulds

The post moulds of the side walls were consistently staggered and consistently spaced in all sections of the structure. The mean diameter was 6.6 cm. with a range of 3 cm. to 10 cm., and the average density was four per m. The density of the post moulds in the corners and the end wall were the same (five per m.) and the mean diameters were very similar (5.7 cm. and 5.5 cm. respectively), both with a range of five cm. to six cm.

Interior support post moulds were distinguishable on only the southwest side of House 7 because of extensive overlapping with House 9. The post moulds were located in a line 1.6 m. from the west side wall, and were 95 cm. apart. They had diameters of 17 cm. and 28 cm., and the largest one had a depth of 46 cm. There were interior support post moulds on the east side of the house but it is impossible to distinguish exactly which ones belong to which house. It may be assumed, however, that a bench line also ran down the side of the structure. Isolated house interior posts were also impossible to distinguish for the most part in House 7 because of the overlapping with House 9. Only three post moulds were definitely interior isolated posts of House 7 and these are randomly distributed all with diameters of seven cm.

Features

Only two features can definitely be said to have been associated with House 7. One of these is a hearth floor which was intersected by another feature and was not fully uncovered because of the presence of the edge of the excavation. This hearth floor is located exactly in the center of the structure. The other feature was an ovate-acuminate pit 41 cm. long, 33 cm. wide, and 13 cm. deep, below the subsoil level, with a basin shaped profile. The fill of this pit was subsoil mottled with subsoil and charcoal, and it contained pottery fragments and chipping detritus. This was most likely a storage pit which was filled with living floor debris. Two other small ovate pits were situated within the walls of House 7, but they are possibly associated with House 9.

House 8

General Observations

House 8 was located in the northwest central portion of the site and was oriented in a northwest to southeast direction. It was selected, because of its relatively small size (16 m. by 6.4 m.) , for total excavation, and was completely cleared except for a portion which was disturbed by a tree. When the structure was first cleared of overburden it was thought by the excavators that it was almost completely overlapped by another structure because of the presence of a line of posts which runs exactly parallel to the northeast side wall for the entire length of the structure. This wall, however, was later interpreted as the result of rebuilding of the structure. The original width of the structure would have been 5.4 m. The shape of the northwest end of the structure was a flat end wall with rounded corners. The southeast end had a flat end wall, one bevelled corner, and a doorway 110 cm. wide in the east corner.

Post Moulds

The exterior most of the two northeastern walls has been interpreted as the final wall of the house. The post moulds were easier to distinguish, they were more closely set together, and, as such, were more similar to the western side wall, and this wall fit the shape of the house in a much more uniform manner. The post moulds of the side walls were consistently staggered, and had a mean density of five per m. The average diameter was 6.9 cm. with a range of 4 cm. to 10 cm. The corner post moulds were not uniformly spaced; in the north corner the density was seven per m., in the west corner it was five per m., and in the south corner it was two per m.

The corner post moulds had a mean diameter of 5.8 cm. with a range of five cm. to seven cm. The northwestern and southeastern end walls had a uniform density of eight per m., were staggered and had an average diameter of 6.3 cm. with a range of four cm. to eight cm.

The post moulds of the other northeast wall were staggered in sections and in a straight line in others with a density of three post moulds per m. and a mean diameter of 6.0 cm. ranging from four cm. to eight cm. The corner defined to the north by this wall consisted of post moulds with a density of four per m. and a mean diameter of 5.5 cm. ranging from four cm. to seven cm.

There were interior support posts located on both sides of the structure, but only on the southwest side was a definite bench row distinguishable. The support posts on the southwest side were located in pairs except for the most northwesterly one, and were 160 cm. from the southwest side wall. Three of the sets were evenly spaced at 230 cm. apart, while the pair in the center of the long axis were 100 cm. from their closest neighbours. The average diameter of these support posts was 16.9 cm. with a range of from 14 cm. to 21 cm. Two of these posts were sectioned, and had depths of 37 cm. and 38 cm. below subsoil.

A pair of support posts were located on the northeast side of the structure 160 cm. from the side wall, while a third post mould was located 60 cm. to the northwest of this pair 145 cm. from the side wall. The average diameter of these three post moulds was 17.7 cm. with a range of from 14 cm. to 20 cm. One of these was sectioned and had a depth of 35 cm.

The support post moulds of House 8 demonstrate two sleeping platforms about 160 cm. wide on either side of the struc-

ture, leaving compartments 2.3 m. long in the northwest end and 2.5 m. long in the southeast end. One large support post (25 cm. in diameter) was located centrally in the northwest compartment.

The interior house isolated post moulds of House 8 were distributed randomly throughout the central corridor of the structure, representing drying and cooking racks. There were no concentrations in association with features and the post moulds were not very closely spaced (1.1 post moulds per square metre). The average diameter of these post moulds was 6.3 cm. ranging from four cm. to ten cm.

Features

There were relatively few features in House 8. Three hearth floors were revealed all of which were located centrally with reference to the original width, of the structure, indicating that this original extent must have existed for some length of time. The hearth floors are 5.25 m. and 3.5 m. apart. One of these was disturbed by roots so that the full extent could not be determined; the dimensions of the other two were 125 cm. by 65 cm. and 70 cm. by 55 cm. The smaller hearth floor was another example of a hearth being located in or near one end compartment, being only 180 cm. from the southeast end wall.

Nine other features were located in House 8 (see Table 4 for dimensions and locations). Three of these were associated with hearth floors. One was a shallow layer of topsoil mixed with ash, fired soil and charcoal, located immediately next to a hearth floor. This feature was most likely the result of spill-over from the hearth. Another was a pit with an ovate plan shape and basin shaped profile located within ten cm. of a hearth. The fill of this pit consisted of a dark humus matrix mottled with charcoal, and contained small

pottery fragments, flint chips, and bone fragments. It appears this pit was used for garbage disposal after fulfilling the function for which it was originally dug. Very similar to the feature was a circular pit located in the extreme east corner of the structure. This pit was also shallow (ten cm.) and had the same type of fill as that mentioned above. The third feature was a pit located 125 cm. away from a hearth. The fill of this small shallow pit consisted of a humus matrix mottled with charcoal and ash, and it contained a large quantity of fire broken rock. A group of four features were located in the center of the long axis of the structure, but off-center with reference to the short axis. One of these was extensively disturbed by previous excavators. All four of these features were pits, and were similar in that they are relatively small, all were circular or ovate with basin shaped profiles, and all had similar contents (humus and sub-soil matrix mixed with charcoal and small amounts of cultural debris). It appears that all of these features were originally small storage pits which, after use, were filled with living floor material. Another very similar pit was the only feature to be located in the northwestern third of the structure. This feature is interpreted in the same manner as the cluster.

House 9

General Observations

House 9 was located in the western section of the site and was oriented parallel to the long axis of the site. This structure was cross-sectioned by Test Trench 1 and sections of the southwest wall, including the northwestern end, were traced. The northwestern end of the structure had a flat end wall and rounded corners. One opening 125 cm. wide was

located in the northwestern section of the west wall. The structure was 35.5 m. long and 5.75 m. wide. It overlapped extensively with House 6 and House 7.

Post Moulds

The post moulds of the west wall were staggered in short sections but were mostly set in a straight line and not spaced closely together. The density ranged from two post moulds per m. to five per m. The mean diameter of the post moulds was 6.4 cm. with a range of five cm. to 12 cm. The spacing of the post moulds for both corners and the end wall at the north end of the structure was very uniform, averaging two post moulds per m. The diameters of the post moulds for the same section were also very uniform averaging 5.9 cm. with a range of five cm. to seven cm.

There was only one interior house support post mould which could be distinguished as belonging to House 9. This was located 140 cm. from the northeast house wall and was 22 cm. in diameter. Only two interior house isolated posts could be considered as associated with this structure. These were located close to the interior support post mould and were six cm. and five cm. in diameter.

Features

The only features which could be isolated for House 9 because of overlapping were both hearth floors. These hearths were located in different sections of the house 12.8 m. apart. There is an unexcavated portion of the structure between them where another hearth could have been located. Neither one of these hearths was totally excavated because of proximity to edges of the excavation, so that their extent remains indeterminate.

House 10

General Observations

Only the extreme north end of House 10 was uncovered during the excavation of Test Trench 1. It was located in the northwest central section of the site and was oriented parallel to the long axis of the site. The end of the structure had a flat end wall and a rounded corner. No openings in the walls were revealed and the dimensions were indeterminate. No features were located.

Post Moulds

The post moulds of the end wall and corner that were excavated were easily distinguished in sandy subsoil. The average diameter of the corner post moulds was 6.0 cm. with a range of five cm. to seven cm. and a density of four post moulds per m. The mean diameter of the end wall post moulds was 5.7 cm. ranging from four cm. to eight cm. and with a density of six post moulds per m.

House 13

General Observations

House 13 was located in the southern section of the site and was oriented parallel to the short axis of the site. It was located during the excavation of Test Trench 3, which exposed the southeastern third of the structure. The southwest end consisted of a bevelled corner and a flat end wall. The northeast end had a rounded corner, but the end shape was indeterminate. No openings in the walls were uncovered.

House 13 was 11.5 m. long; the width was indeterminate. The structure overlapped extensively with House 14.

Post Moulds

The post moulds of the south side wall were uniformly staggered with a density of 5.2 post moulds per m. The mean diameter was 5.8 cm. with a range of four cm. to eight cm. The density of the southwest corner (four post moulds per m.) was much less than the density of the southeastern corner (nine post moulds per m.) but the mean diameter (5.6 cm. with a range of four cm. to seven cm.) was the same for both. The post moulds of the west end wall were evenly distributed in a straight line with a density of three per m. Post moulds in this part of the wall had an average diameter of 3.1 cm. ranging from two cm. to five cm., which was much less than that for the sides and corners.

There were several interior support posts located within House 13 but none of these could be isolated from House 14. There were also a number of interior house isolated post moulds, some of which were clustered around a hearth, but none of these could definitely be associated with House 13.

Features

Of six features which were located inside House 13 only one could be definitely associated with this structure. This feature was a pit that obscured part of the wall of House 14. It was irregular both in plan and profile shape, and was 64 cm. long, 60 cm. wide, and nine cm. deep. The fill consisted of a topsoil matrix mottled with subsoil and charcoal, with no cultural debris. It was most likely a refilled storage pit located in the extreme west end of the structure. The

fact that it obscured part of the wall of House 14 indicated that House 13 was the later structure.

House 14

General Observations

House 14 was located in the southeastern section of the site and was oriented parallel to the short axis of the site. About one-third of the structure was uncovered by Test Trench 3. Two corners and parts of both end walls were excavated. The corners were rounded and the end walls were flat. No openings in the walls were revealed. House 14 was much larger than House 13, and the two overlap extensively. The length of House 14 was 25.5 m. and the width was indeterminate.

Post Moulds

The post moulds of the south side wall were consistently staggered, but were more densely distributed in the centre portion of the wall. The density ranged from six post moulds per m. to eight per m. The post moulds of the corners were more dense (13 per m.) than the side wall, but the end walls had the same density as the side wall. The mean diameters of the post moulds decreased from the side wall (6.1 cm. with a range of three cm. to nine cm.) to the corners (5.3 cm. with a range of three cm. to nine cm.) and the end wall (5.1 cm. with a range of three cm. to six cm.). Almost all of the wall post moulds of House 14 contained large amounts of charcoal and ash, suggesting that this structure was destroyed by fire and House 13 was built in its place.

There were no interior support post moulds in the section of House 14 that did not overlap with House 13. Interior

house isolated post moulds were randomly distributed with a mean diameter of 6.2 cm. ranging from five cm. to eight cm. The density was 1.5 post moulds per square m.

Features

Two hearth floors were associated with House 14. One of these was an anomalous feature which partially obscured the east end wall. It most likely post-dated the structure and could have been an exterior hearth. The other was located inside of both House 13 and House 14, but a number of interior house isolated features were located in the hearth floor, and an ovate pit had been dug into it. This suggests that it originally was associated with House 14 and was disturbed with the building of House 13. This hearth floor was 123 cm. long and 60 cm. wide. It was located three m. from the southeast side wall, and 3.5 m. from the southwest end wall. No other features were definitely associated with this structure.

House 15

General Observations

House 15 was located in the southern section of the site and was oriented exactly parallel to House 14. About 35 percent of this structure was uncovered by Test Trench 3. The west and north corners were rounded; the shapes of the end walls were indeterminate. No opening in the walls were found. The width of the structure could not be determined, but the length was 22.5 m. House 15 overlapped extensively with House 21. There were no features.

Post Moulds

The post moulds of the northwest side wall were staggered with a mean diameter of 6.0 cm. and a range of from three cm. to eight cm., and a density of five post moulds per m. The corners and ends follow the general pattern of smaller post moulds set in closer together. The corner post moulds had a mean diameter of 4.9 cm. with a range of three cm. to six cm. and a density of eight per m. The end wall post moulds had an average diameter of 5.0 cm. with a range of four cm. to six cm. and a density of nine post moulds per m.

Only one interior support post mould was found. It was located 100 cm. from the northwest side wall and had a diameter of 26 cm. and a depth of 41 cm. Very few interior house isolated post moulds were located in House 15. The eight that did occur had a mean diameter of 6.3 cm. with a range of five cm. to seven cm. and a density of two per square m. These post moulds were randomly distributed.

*House 18**General Observations*

House 18 was located in the central section of the site and was oriented north to south. Only the north end of the structure was uncovered during the excavation of Test Trench 2. The end of the house did not have the characteristic flat end wall shape of all the other structures on the site, but was very rounded. A doorway 90 cm. wide occurred in the centre of the end of the structure. House 18 was also very narrow, being only 5 m. wide. The length was not determined. No features were uncovered in the excavation of the structure although five m. of the end of the structure were uncovered.

Post Moulds

The post moulds of the sides, corners, and end wall varied little in terms of diameters and density. The mean diameter was 5.9 cm. with a range of four cm. to eight cm. The average density was four post moulds per m. No interior support post moulds were located in this section of the structure but a surprising number of interior house isolated post moulds were scattered randomly in the space that was excavated. These post moulds had a mean diameter of 6.1 cm. with a range of four cm. to eight cm. The density was two post moulds per square m.

House 20

General Observations

House 20 was located in the northeast section of the site and was oriented parallel to the long axis of the site. Only the end wall and southwest corner were uncovered during the excavation of Test Trench 2. The end wall was flat and the corner was rounded. A doorway 80 cm. wide was located in the center of the end wall. Neither the length or width of the structure were determined. No features were found.

Post Moulds

No data were recovered for the side walls of House 20. The post moulds of the end wall and the corner were similar in diameter (5.0 cm. in mean diameter with a range of four cm. to six cm.) but the post moulds of the end wall were more dense (eight post moulds per m. as opposed to six per m.).

There were no interior support post moulds or interior

house isolated post moulds but an interior house wall was located in the end of House 20. This wall abutted against the end wall of the structure on the west side of the doorway and extended diagonally toward the east side of the house. The mean diameter and range of these post moulds was the same as that of the end wall and corner, but the density was only four post moulds per m. This wall appears to have been an interior windbreak or defensive construction, since it cuts diagonally across the entranceway to the structure.

House 21

General Observations

House 21 was located in the southern portion of the site and was oriented parallel to House 14 and House 15. It overlaps extensively with House 15. Only part of the northeastern side wall and the north corner were revealed, leaving the length and width undetermined. The corner was rounded. No features were uncovered.

Post Moulds

The post moulds of the north side wall were staggered in sections but in a straight line for the most part. The post moulds of the corner were unstaggered. The mean diameters of both the side wall and corner post moulds were the same (5.3 cm. with a range of four cm. to seven cm.). The density of the side wall was greater than that of the corner (six post moulds per m. as opposed to two per m.). There were no other post moulds associated with this structure in the section that was excavated, and there were no openings in the walls.

House 22

General Observations

Only the northeast end wall and the west corner of this structure were uncovered in Test Trench 3. House 22 was located in the east corner of the site and appeared to be oriented north to south. The end of the structure consisted of a flat end wall and a bevelled corner. No openings in the walls were revealed and the length and widths were indeterminate. No data on features were recovered.

Post Moulds

The post moulds of the end wall and the corner were the same in diameter (5.3 cm. with a range of four cm. to seven cm.). The densities were different, however, being six post moulds per m. for the end wall and two per m. for the corner.

Three interior house isolated post moulds were randomly distributed in the end of the structure. These had an average diameter of 5.0 cm. and a range of four cm. to seven cm.

House 24

General Observations

House 24 was located in the east section of the site and was oriented parallel to House 22. Only the end wall of this structure was uncovered during the excavation of Test Trench 3. The end wall was flat, there were no data recovered for side walls or corner shape. No openings in the end wall were located and the dimensions of the structure were not determined. No features were found.

Post Moulds

No data on corners, side walls, interior support post moulds or interior house isolated post moulds were recovered. The post moulds of the end wall were set in a straight line with a density of three post moulds per m. The mean diameter of these post moulds was 5.9 cm. with a range of four cm. to eight cm.

Post Moulds And Features External To The Structures

Besides the evidence recovered for longhouses within the confines of the village, there was a small amount of data gathered for exterior house activity. These data were in the form of several exterior house walls, isolated post moulds, and features. The extent of the excavations was too limited to positively identify the functions and associations of these data, but some inferences can be made.

Post Moulds

The few isolated post moulds that were discovered outside of the structures on all parts of the site were most likely external drying racks. The function of the rows of post moulds, which in most cases, were obviously not the walls of houses, is not as clear. They may have served as windbreaks, or as defensive constructions, or both. A wall which was an extension of the northeast wall of House 1, to the southeast, may have served the purpose of both windbreak and defensive measure (see Defense). The post moulds of this wall were 6.86 cm. in mean diameter with a range of from six cm. to eight cm. and a density of two per m. Another row of posts located to the northwest of House 5 and running in a southwest to northeast direction may also have been defensive in

function, but also could have been a drying rack since its length was indeterminate. The mean diameter of these post moulds was 6.8 cm. with a range of from six cm. to eight cm. and a density of two per m. An anomalous set of post moulds was discovered on the southwest side of House 7 which at first was interpreted as an additional structure overlapping House 7. The shape of the end that was uncovered, however, was highly irregular, and not enough was excavated to determine if it was a structure or not. The wall formed by the post moulds described a curve which joined with the House 7 southwest side wall. The mean diameter of the post moulds ranged from 5.6 cm. with a range of from three cm. to eight cm. where the wall is straight to 7.3 cm. with a range of from six cm. to nine cm. in the curve, while the density was consistent at three post moulds per m. Two other rows of posts were uncovered in Test Trench 2, neither of which have clear interpretations. One, in the southwest end of the trench, had post moulds with a mean diameter of 5.7 cm. with a range of from five cm. to nine cm. and a density of four per m. The other was associated with House 18 but its purpose remains unclear. The wall had post moulds with a mean diameter of 6.1 cm. and a range of from five cm. to seven cm. The density was three per m.

Features

Very few features were located outside of the structures. One ovate pit was located outside of House 4 to the southwest with dimensions of 35 cm. by 24 cm. This feature, however, was not excavated. One hearth was located partly obscuring the northeast wall of House 14. This feature was only partially revealed due to the presence of a root disturbance, so the dimensions were not determined. It appears to have been an external hearth after the replacement of House 14.

A fairly extensive refuse filled depression was found to the northwest of House 5 but the full dimensions were not determined. This feature was interpreted as basal portions of a midden and corresponds with an area of high artifact density according to the 1935 provenience data.

Activity External To The Earthworks

In 1976, 11 test pits and three test trenches were excavated outside of the enclosure of the earthworks in order to investigate the possibility of activity external to the confines of the village. The test pits, all measuring 50 cm. by 50 cm., were dug at various intervals outside of the earthworks. Although they yielded no evidence of cultural activity, the test pits demonstrated that areas to the south and west of the site had been disturbed, possibly by ploughing. To the west of the earthworks a trench was excavated by bulldozer along the fence which forms the boundary of the Parks Canada property and about eight m. from the outer earthwall. This trench was two m. wide and 45 m. long. No cultural material was recovered from this trench, and the subsoil demonstrated no evidence of human disturbance. Two two m. test trenches were excavated by hand to the southeast of the earthworks ten m. from the outer wall, next to the south fence and on top of the sand knoll which borders the site. In the subsoil of these trenches several shallow refuse filled depressions were located which appeared to be basal midden deposits. The location of this trench corresponds to the location of a midden reported by Coyne in 1893.

Coyne states:

The members of the Elgin [Historical and Scientific] Institute made a pretty thorough examination of a large ash heap southeast of the fort. It had, however, been frequently dug into during the last score

or two of years, with ample results, it is said, in the way of stone implements of various kinds. There still remained, however, arrowheads and chippings of flint, stones partially disintegrated from the action of heat, fragments of pottery...; fish scales, charred maize and bones of small animals...(Coyne 1893, 22-23).

This midden, located outside of the village, was almost completely destroyed by 1976. Very little cultural material was recovered from this area during the excavation of the trench.

In 1935, it appears that a very limited survey of the area immediately surrounding the site was conducted. The banks of the stream which continues away from the village to the west were surveyed, and about 700 feet from the site what was called "traders' site" was located. This consisted of a midden deposit on the southern bank of the stream and a structure located adjacent to the midden. This structure had dimensions of approximately 40 ft. by 20 ft. or 12.1 m. by 6.05 m. This structure was approximately the same width as those in the village, but was shorter than most. Jury states that the ceramics associated with this "traders' site" were identified by Wintemberg as being Petun, Iroquois, and Huron (Jury 1944, 18) but Wintemberg does not mention this site in his report and none of the artifacts from the midden were available for examination in 1976. Evidence for the location of this structure was not found until after the field season was completed. A photograph in the notes produced by Dr. Jury helped to locate this structure.

Midden Deposits

By the summer of 1976, all of the middens within the walls of the village had been destroyed by previous excavation, and survey of surrounding fields failed to produce any evidence of garbage dumps. For information on midden deposits

it has been necessary to refer totally to data from previous reports and investigations. Of the midden deposits at the Southwold site, Wintemberg states:

In most Iroquoian sites the refuse deposits are found in the village itself, but at the Southwold site most of the larger deposits were located outside of the walls. There are said to be several deposits in the field immediately west of the outer wall, but these were obscured by a crop of clover and could not be located or excavated. A few small deposits were found inside the walls...(Wintemberg 1935, 6).

The location of one midden outside of the earthworks on the knoll to the southeast of the site has already been discussed (see Activity External To The Earthworks). Wintemberg was not specific in his report with reference to the location of internal middens except to state that deposits were found in the southeast corner and along the east bank of the stream which flows north through the site.

With the reconstruction of the 1935 grid system, and the subsequent plotting of the artifacts recovered, in terms of this grid, several clusters of cultural material were apparent in the enclosure. For the location of these clusters see Fig. 8. As can be seen from this map, the majority of the clusters occurred at the ends of houses, and are likely midden deposits, while others may be concentrations of living floor material. It can also be seen that several concentrations of midden deposits occurred on the east banks of the stream, as was reported by Wintemberg, but, contrary to his statement, no sizeable concentrations appeared in the southeast corner. It is also apparent that a fairly large amount of material was recovered from the base of the inner wall of the earthworks in the northeast section of the site and also

between the earthworks in the same section. It is interesting to note that there was a fairly large area in the center of the site where no concentrations indicating midden deposits or living floor deposits appeared.

When the plan of the locations of the structures of the village is considered, it is not surprising that large deposits of midden material were not located inside the village. The structures were located so closely to each other that it would have been impossible for large garbage deposits to have accumulated in most sections of the village. The inhabitants obviously disposed of refuse by carrying it outside of the enclosure, by dumping it against the inner wall of the earthworks, thereby strengthening the stockade at the same time, and by dumping it over the banks of the stream. The concentration of debris between the two earth walls in the northeast section of the site can also be explained if it is assumed that the easiest access to the space between the walls would have occurred at the break in the palisade in the northeast corner used as an entrance.

Interpretation Of Settlement Pattern Data

Structures

As can be seen from the site map, the orientation of structures at the Southwold site was variable, although definite patterns in different parts of the site are apparent. In the northeastern half of the site all of the structures, except House 5, are oriented more or less parallel to the long axis of the site. In the southwestern half of the site, however, the orientation is markedly different. The structures in the south section are oriented opposite to those in the north-

eastern half of the site, while, in the east section the structures are oriented obliquely to the others. Reasons for these three distinct groups are not clear. It is obvious that orientation with respect to prevailing winds was not practised at this site, since some structures were oriented exactly opposite to others. It is possible that the change in orientation was employed to confuse any enemy who gained access to the interior of the village (see Defence). Whether the discrepancy may be attributed to social differences between the inhabitants in the different sections of the site or not is difficult to demonstrate with the limited data available, although some comments can be made about this aspect in terms of pottery design (see Artifacts). It is apparent, however, that the occupants of the village wished to retain the general pattern of orientation, since in the majority of the cases of overlapping structures, the original structures were replaced with others that had approximately the same orientation.

The dimensions of the structures, where determined, also varied considerably over the area of the village. Since House 5 is interpreted in a separate class from living structures, its dimensions are not included in the following statistics. The widths of the structures varies from 5.0 m. to 6.5 m. with a mean width of 5.9 m. ($n = 9$). The widths did not have any pattern with respect to location. The lengths of the structures were extremely variable, ranging from 11.5 m. to 49.5 m. with a mean length of 28.5 m. ($n = 9$). In the case of structure length, there are at least two sections of the site where two houses of similar length are grouped together. In the northeast section of the site House 1 and House 3 having lengths of 23.25 m. and 26.5 m. respectively are located side by side. House 6 and House 9, located in the northwest section have lengths of 49.5 m. and 46.5 m.

respectively and are located adjacent to each other. The significance of this pattern, if it was such, cannot be demonstrated, since similar data are not available for other parts of the site.

As was stated above, several instances of overlapping structures occurred in the village. On the basis of very limited data, tentative temporal relationships for these houses can be assumed. In the case of Houses 6, 7 and 9, the house walls of House 9 are less clear than those of the other two houses. From this it is postulated that House 6 and House 7 replaced House 9.

At the south end of the site three instances of overlapping occurred. In the case of House 13 and House 14, a feature located inside of House 13 obliterated a portion of the house wall of House 14. As well as this it was found that nearly all of the post moulds of House 14 contained ash or charcoal. It has been assumed, therefore, that House 14 was destroyed by fire and replaced by House 13. With the overlapping of House 15 by House 21 and House 22 it can only be stated that it is likely that House 21 and House 22 were contemporaneous since they do not overlap each other.

There were several areas on the site that were not excavated in 1976 where additional structures could have been located. These areas allow for a total of four or five more structures if the general pattern of orientation of structures in the different sections of the site are adhered to. There was a large section of Test Trench 2 in the center of the site in which no structures were located. This section coincides with an area that, with the plotting of the distributions of the material recovered in 1935, showed no concentrations indicating midden or living floor deposits. It is possible, therefore, that there was an area of approximately 300 square m. in the exact center of the site which

was left open and could have served as a central activity or meeting place.

The shapes of the end walls on the structures, where determined, were almost all flat; House 18 was the only example of a rounded end. Not enough of this structure was excavated to explain this discrepancy. The corners, however, vary in shape from rounded to bevelled with no apparent pattern. House 15, for example, had a rounded corner at one end of the structure and a bevelled corner at the other end.

The entrance ways to the structures that were revealed also varied in construction and location from structure to structure. Of the seven doorways located, six were simple breaks in the house walls. Three of these occurred in the center of the end walls and had a mean width of 91.7 cm. with a range of from 80 cm. to 105 cm. Two others were located in the corners of structures; they were both 60 cm. wide. One opening, 125 cm. wide, occurred in the side wall of House 9, the longest structure on the site. The one other entrance way occurred at the south end of House 1 and fit in with the complicated nature of the structure since it was formed by the overlapping of the house wall in the southeast corner leaving an opening 60 cm. wide.

The patterns of post mould diameters and densities for the walls of the structures remained fairly constant over the site. In general, the side walls consisted of the largest post moulds (mean diameter of 6.2 cm. with a range of from three cm. to 12 cm.), but with the lowest density (mean density of 4.8 post moulds per m.), when compared to the corners and ends. The post moulds of the corners and ends had approximately the same size (mean diameters of 5.55 cm. and 5.6 cm. respectively) but the densities of the end walls were substantially larger than the densities of the corners (mean densities of 6.3 post moulds per m. as opposed to 5.6 post moulds per m.). Since the post moulds of the corners and ends were

generally discrete, it appears that the density was not the result of extensive replacement of posts. As long as the construction practices of the Neutral remain unknown, it is difficult to explain the differences in diameter and density.

With comparison of the house wall post moulds, between the north and south sections of the site, it was discovered that, although the densities remain approximately the same, there was a difference in diameters. The post moulds of the structures at the north end were generally larger, having mean diameters of 6.5 cm. for the side walls, 5.9 cm. for the corners, and 5.8 cm. for the ends. The diameters of the post moulds at the south end were 5.8 cm. for the side walls, 5.2 cm. for the corners, and 4.9 cm. for the ends.

The interior structure post moulds were generally very sparse, with a mean density of 2.8 post moulds per square m., although the densities for House 1 and House 3 were much greater (eight post moulds per m. and seven post moulds per m. respectively). There was little discrepancy in diameters over the site; the mean diameter was 6.1 cm. with a range of from four cm. to 11 cm. There was also very little clustering of interior posts around hearths or in the centers of structures. The mean diameter of the post moulds was rather large, and suggests that the posts being used were generally not small sticks that were continuously being replaced. It is possible that the larger posts were intended to be fairly permanent as far as use as drying racks and bench supports were concerned.

Although examples of interior structure support post moulds were recovered, patterns for many of the structures were not established. The bench rows that were established by the support posts averaged 1.46 m. wide with a range of from 1.0 m. to 1.6 m. The average width of the central corridors defined by the bench rows in the structures was 2.9 m. wide. Very few support posts were located other than in the bench rows,

but the few that were revealed were all centrally located. The mean diameter of the support posts was 20.8 cm. with a range of from nine cm. to 28 cm. The bench rows of House 8 and House 4 ended in such a way as to leave compartments at the ends of the structures. In both of these cases there were hearths located between the last set of support posts at the ends of the structures. This suggests then an alternative to the longitudinally centered hearth location was employed at the ends of structures; that is, the hearths were located at the end of the living compartment closest to the end wall instead of being in the center of the compartment.

Because of the limited nature of the excavations of 1976 there was very little data recovered on features such as hearths and pits inside of structures. Only three examples of hearth spacing were located. In excavations in two separate parts of House 9 two hearth floors were revealed 12.8 m. apart. It is assumed that there was one hearth in the unexcavated area between these two, then the hearth spacing for this house was 6.4 m. In House 8, which was almost totally excavated, three hearth floors were revealed 3.6 m. and 5.2 m. apart. The latter figure, which is taken from the center of the long axis of the structure, is more representative, as opposed to the other, which included a hearth at the very end of the structure. The mean of the hearth spacing is, then, 5.8 m.

The interiors of structures were relatively clean with reference to pits. About 90 square m. were excavated of House 8, for example, but only eight pits were found in the subsoil. In general the pits were either isolated or clustered in small groups of four or five features with very few pits located under the bench areas. The clusters had no relationship to hearth floors and generally were not centrally located. In both House 3 and House 8 there were discovered isolated pits which appear to have been associated with hearths.

In House 3 the fill of two pits demonstrated that they were used to contain spillover of ash and fired soil from a hearth. In House 8, one feature located immediately next to a hearth was used to contain spillover. Another pit, located slightly over one m. from a hearth, was used to contain fire cracked rock. In general, all of the other pits on the site were used for storage and subsequent garbage disposal. Surprisingly, it was discovered that the pits contained very little cultural material. Of the features that were excavated 50 per cent were found to be sterile. It was also discovered that the profiles of the pits were relatively simple. Only 16.7 per cent of the pits had more than one layer. The matrix of the pits was generally dark humus mottled with subsoil, ash and charcoal; these comprised 80 per cent of the sample. Ten per cent of the pits were ash filled, and ten per cent had a matrix of subsoil mottled with topsoil, charcoal, and ash.

The statistics for the features have been summarized in Tables 5 and 6. It can be seen that pits with an ovate plan shape and basin profile shape were the most predominant (46.4 per cent) followed by pits with a circular plan shape and basin profile shape (21.4 per cent). Various other combinations of shapes were represented in small amounts. The mean length of all the pits was 46.5 cm. with a range of from 18 cm. to 98 cm. and the mean width was 34.0 cm. with a range of from 14 cm. to 64 cm. The mean depth was 14.8 cm. with a range of from one cm. to 33 cm. and the mean volume was 11.9 l. with a range of from one l. to 28 l. It can be seen that the pits varied considerably in size, with no apparent pattern as far as location within structures or between structures is concerned.

Defence

The Southwold site was located in an area surrounded by fertile soils, and it had a reliable source of water running through it. Its location, however, was atypical, in some aspects, when the usual patterns of Late Ontario Iroquois are considered. Both the Lawson site and the Clearville site, the closest Neutral villages for which information is available (see Summary of Archaeological Data on the Neutral), had locations which contrast with that of the Southwold Earthworks. The Clearville site was partly encircled by a fairly large stream and had banks as high as 40 ft. (12 m.) on three sides (Jury 1939, 1). The Lawson site was located on a bluff above the convergence of a small creek and a major stream, and is bordered on three sides by banks 45 ft. (14 m.) high (Wintemberg 1939, 2). The Southwold site, on the other hand, was surrounded by extremely flat land except for the small knoll to the west of the site. At the Lawson and Clearville sites, attackers would have been hampered by the high banks, whereas at Southwold an attack could have been mounted on all sides of the village. The occupants of the Southwold site obviously employed a different philosophy of defence, choosing the option of a guaranteed water supply over a more defensible position, such as was located above nearby Talbot Creek, and depending on the earthworked palisade instead of high banks. It is possible that the defenders of the village expected to be held under siege, although current evidence suggests this was not a common practise among the prehistoric Iroquois. If so, the guaranteed sources of water would have been a better defence than an easily defended position.

If it is assumed that the earthworks were peaked around the stockade when the village was occupied, as opposed to their present flat-topped nature, and that the accompanying ditches were not filled in as much, then it would have been difficult for an enemy to approach the actual stockade.

Any fires that were set in the stockade could have been extinguished by water obtained from inside the enclosure. Entrance to the village through the opening where the stream exited from the enclosure would have been difficult because of the high banks, and the multiple stockade that stood along the bank of the stream. The opening identified by Wintemberg as the entrance to the village (see Earthworks and Palisade) was arranged so that access to the enclosure was not direct, thereby providing a hindrance to attackers. The stockade itself would have been greatly strengthened by the foundation provided by the earthworks. With the several rows of posts and brace posts in the corners, the stockade would have been very difficult to break through.

The arrangement of the structures inside the village also appears to have had some basis in defensive measures. Immediately inside the entrance the position of the structure is such that attackers entering the village would find themselves boxed into a relatively small and closed space. Since the north end of House 1 abutted the earthworks and the east end of House 5 approached to within one m. of the earthworks, the only direct route toward the center of the village was through the space between House 5 and House 3, which is also fairly narrow and could easily be covered by the defenders. It can be seen from the map of the site showing the location of the structures that the houses are grouped extremely close together. This arrangement produces a proliferation of long and narrow corridors between structures with an abrupt change of orientation between the northeastern and southwestern sections of the site. This maze-like pattern of structure location would have been well known to the inhabitants of the village, but would have been very confusing to an attacking enemy. As an example, a warrior entering the village through the opening at the north of the site and turning to go around the north end of House 3 to avoid crossing the open area

would have found himself in the position of turning back or proceeding down a corridor between House 1 and House 3 which was at least 24 m. long because of the external wall at the end of House 1, and less than one m. wide. This interpretation assures, of course, that the structures were contemporary. The width of this corridor would have allowed only one person to proceed at a time with no cover, who could easily have been shot at from the end of House 3. A number of defenders grouped at the south end of House 3 and around House 5 would have had a distinct strategic advantage. It is possible that this situation also existed at the south end of the site near the opening in the earthworks where the stream entered the enclosure. Originally there would have been a corridor 17 m. long and one m. wide between House 14 and House 15. There were not, however, enough excavations conducted in this area to verify this hypothesis.

In general, the defensive measures at the Southwold site were such that an enemy attacking the village, not being able to control the water supply, would have to gain access to the interior of the enclosure in order to take the village. Such an entry was rendered extremely difficult by the nature of the palisade, and, if such an entry was achieved, control of the interior was made difficult by the arrangement of house structures.

Population

Because of the limited data on structure locations and dimensions, the estimate of the population of the village can only be a very approximate figure. It must be taken into account that it is possible that not all of the structures were located by the test excavations of 1976, and that several instances of overlapping of structures occurred. It must also be taken into account that the figure of 5.8 m. for hearth spacing is

also very approximate, since it is an average figure obtained from the only two examples of hearth spacing that were located by the excavation, and these spacings varied rather extremely. Of the nineteen structures that were revealed, it has been interpreted that House 5 was reserved for visitors and, as such, was not occupied by the inhabitants of the village, and that Houses 9, 14, and 15 were early structures that were burnt down or torn down and replaced by other buildings. There was enough unexcavated space remaining on the site after the 1976 excavations for four additional structures, leaving the approximate total of structures that could have been occupied simultaneously as eighteen. The average length of the structures for which this dimension was determined was 28.5 m. This length allows enough space for four hearths 5.8 m. apart and compartments 2.5 m. long at each end of a structure.

Ethnographic data on the Huron states that two families shared a single hearth, with one family on each side of the hearth (Sagard 1939, 94). Heidenreich has estimated the average Huron family as consisting of six individuals (Heidenreich 1971, 99). By analogy it may be stated that these estimates also apply to the Neutral, although there is no direct reference to family size in the primary sources. Taking these statistics into consideration with reference to the mean hearth spacing at the Southwold site, it is postulated that 12 individuals occupied every 5.8 m. of the length of a longhouse, with five m. allowed for end compartments. If an average of eight nuclear families of six individuals each occupied the structure of average length, then the total population of the village with eighteen structures would be 864 persons. The estimated population of the Southwold village can be placed, then, at between 800 and 900 individuals.

Artifacts

Introduction

The major portion of the artifact assemblage from the Southwold site was recovered in 1935 by Wintenberg's excavation. During the 1976 excavations a very small amount of cultural material was recovered. A summary of the frequencies of the artifacts recovered is presented in Table 7. The 1935 collection has been loaned to the present investigators by the National Museum of Man so that the entire assemblage was available for examination. Because it has been possible to reconstruct the grid system used by Wintenberg in 1935 the provenience of all the material has been established and, therefore, the distribution of the artifacts was available. The objective of the analysis was not to provide a complete description of the material culture of the inhabitants of the site, since both the time allotted for the analysis and the size of the collection rendered this impractical, but rather to provide distributional data, not only in terms of frequencies, but also in terms of style. For this reason the rim sherds, which best represent variation in style, have been emphasized, and were subjected to a more rigorous analysis than the rest of the assemblage. Because of the nature of the provenience data, the small size of the samples, the lithic and bone artifacts received only brief consideration in this paper. The ceramics are reported under the categories of pottery and ceramic pipes. Also included is a brief section on the floral remains recovered from the site.

Rim Sherds

Introduction

The rim sherds from the Southwold site have been analyzed for two purposes. First, it was desired to produce a sample of analyzed data for comparative purposes for further work on the Neutral that may be done in the area. At present, there are no good samples of data which exist for comparison. Second, it was hoped that intrasite comparisons could be conducted once the provenience for the artifacts was established. This comparison was made between specific areas of the site with the hope of recognizing any variation in traits that might occur.

The analysis has been conducted by the examination of those attributes that are currently recorded for rim sherds (Ramsden 1977). This examination was conducted with a sample of 502 rim sherds. This constitutes the entire sample of analyzable rims, most of which were recovered during the 1935 excavations at the site. The processing of the attribute data was performed by means of a computer code developed by Peter Ramsden, McMaster University, and the statistical manipulation was conducted by use of the Statistical Package for the Social Sciences (Nie et al. 1975).

The following section reports the results of the attribute analysis, and the results of comparison of selected attributes between different areas of the site. Also included is a discussion of MacNeish's typological analysis of the same collection.

Attributes

The attributes which were recorded for each rim sherd can be divided into the categories of processes of manufacture, shape

and size, and decorative motifs and techniques. These categories are discussed in the next section.

Processes of Manufacture

The attributes that were recorded which related to processes of manufacture of the rim sherds were the surface texture of the interior, exterior and lip, and the kind of temper. The colour of the cross-section was not recorded. These attributes were found to be extremely homogeneous throughout the entire sample. The exterior surface texture was smooth for 98.8 per cent of the specimens, while 1.2 per cent showed indications of wiping. For interior surface texture 99.2 per cent of the sherds were smooth, 0.4 per cent were paddle marked, and 0.4 per cent showed signs of wiping. The surface texture of the lip of the specimens was smooth for 100 per cent of the sample. In almost all of the rim sherds (99.6 per cent) grit temper was used, with only 0.4 per cent having no tempering at all.

Shape and Size

The shape of each rim sherd was recorded in observations relating to the form of the exterior and the profile, and the orientation of the lip and the entire rim. Ninety-four per cent of the rims had collars; six per cent were collarless. Of the collared rims 53.6 per cent had well defined collars, while 46.4 per cent had rounded collar bases. The orientation of the rim to the rest of the pot was, for the most part, vertical (69.1 per cent) with 17.3 per cent of the specimens being outflaring, and 13.6 per cent being insloping. The exterior rim profile was straight for 62.5 per cent of the sample, convex for 28.7 per cent, and concave for 8.8 per cent. The interior rim profile was also straight for the

majority (54.8 per cent) with 36.2 per cent being concave, and 9.0 per cent being convex. The form of the lip of the rim sherds was homogeneous across the sample, with 99.4 per cent being flat and 0.6 per cent being rounded. For the angle of the lip to the interior, 53.7 per cent of the sample were at right angles, 38.7 per cent were obtuse, and 7.6 per cent were acute.

The size of each rim were recorded in measurement of the height of the collar, width of the lip and the width of rim at the base of the collar. Orifice diameter was not recorded. The means, ranges and deviations of these attributes are presented in Table 8. The frequency distributions of both lip thickness and basal collar thickness formed smooth single mode curves, although the peak for lip thickness was skewed toward the left. Collar height, however, did not have a smooth frequency distribution and demonstrated no clear peaks. This is discussed in greater detail below (see Spatial Analysis).

Design Motifs and Techniques

The analysis of decorative motifs and techniques was conducted with respect to major and secondary design on the exterior, and interior design. For the collared rim sherds a total of 17 different design motifs were recorded for the primary exterior collar design. The motifs were recorded for 462 of the collared rims; for ten rims this observation could not be made. These motifs are illustrated by Ramsden (Ramsden 1975, 96-99) and the frequencies are presented in Table 9. These motifs can be grouped together in categories of simple basic motifs, horizontal motifs, opposed motifs, complex motifs, and plain motifs. The simple basic motifs, consisting of slashes on the collar, were by far the most predominant, forming 65.6 per cent of the sample, followed by plain motifs

(22.9 per cent), opposed motifs (10.8 per cent), horizontal motifs (0.4 per cent) and complex motifs (0.2 per cent). The collarless rim sherds had a total of seven different motifs which are tabulated in Table 10. These motifs can be grouped into the same categories as the collared sherds. In this case plain motifs were the most predominant (53.3 per cent) followed by simple basic motifs (43.3 per cent), opposed motifs (6.7 per cent), horizontal motifs (3.3 per cent), and complex motifs (3.3 per cent).

For secondary decoration 93.3 per cent of the collared sherds had none, and 100.0 per cent of the collarless sherds had none. The secondary collar design on the collared sherds consisted of punctates in all but two cases, with single horizontal rows comprising 3.9 per cent, double horizontal rows 0.4 per cent and opposed lines of punctates 0.8 per cent. Of the secondary decoration that did not consist of punctates 1.1 per cent were vertical slashes, and 0.4 per cent were horizontal slashes.

For decoration of the lips of the rim sherds 98.8 per cent of the sample had none. Of the other 1.2 per cent, 0.6 per cent consisted of punctates, and 0.6 per cent consisted of incised lines.

The interiors of the rim sherds were undecorated for 65.7 per cent of the sample. For those that did have interior decoration, a total of four different motifs were recorded. These are illustrated by Ramsden (Ramsden 1975, 120) and the frequencies are presented in Table 11. Of the motifs 29.7 per cent consisted of punctates, 3.8 per cent were one or more rows of vertical slashes and 0.8 per cent were vertical incised lines.

Ninety-three per cent of the rim sherd sample was analyzable in terms of neck decoration. Of this 82.7 per cent had no neck decoration. The decoration that was recorded for 17.3 per cent of the sample was predominantly one or more

horizontal incised lines (15.9). Vertical or diagonal incised lines comprised 0.8 per cent of the motifs, broken horizontal lines 0.2 per cent, and horizontal lines over an opposed motif 0.2 per cent.

For secondary neck design 97.0 per cent of the sample had none. The other three per cent was comprised of punctates.

A cross-tabulation of collar design and neck design was performed to obtain a preliminary chart on design sequence. The results are present in Table 12. The major design sequence were simple basic motifs over a plain neck (50.4 per cent), plain collar and plain neck (22.3 per cent), simple basic motifs over horizontal motifs (12.8 per cent) and opposed motifs over a plain neck (8.5 per cent). The other combinations each comprised less than 2.0 per cent of the sample.

The technique used for the decoration of the rims was predominantly incising although linear stamping, punctates, cord wrapped stick and dentate stamping were also used. On the collars 98.3 per cent of the design was incised, 1.1 per cent was dentate stamped, 0.3 per cent was punctated, and 0.3 per cent had corded stick. On the lip 80.0 per cent had incising, 20.0 per cent had punctates. For the interior of the rim sherds 85.3 per cent consisted of punctates, 12.9 per cent consisted of incising, and linear stamping and corded stick made up 1.8 per cent. The primary neck decoration was 100.0 per cent incising.

Typological Analysis

The rim sherd sample has not been analyzed typologically by the present investigator. The sample has been analyzed, however, by MacNeish, and the results of this analysis have been presented in his Iroquois Pottery Types (MacNeish 1952, 12). Table 13 tabulates the types found at the Southwold

site as well as those found at the Lawson site. It can be seen from the relative percentages of types that these two sites are fairly closely related as far as rim sherd types are concerned. Wright has calculated a coefficient of correlation for these two sites (Wright 1966, 156) which is quite high. This relationship is discussed in more detail in the concluding chapter.

Spatial Analysis

Because of the reconstruction of the 1935 grid system which thereby established provenience for the rim sherds, it was possible to analyze the rim data in terms of variability in attributes across the site. Plotting of the artifact locations from 1935 demonstrated that several clusters of material occurred on the site (see Figure 8). By selecting attributes which were considered to be sensitive to intra-site variation, it has been possible to compare some of the clusters as areas of the site, and check significant variations by means of statistical techniques.

In order to obtain samples which were large enough to compare statistically, the individual clusters of artifacts were grouped into a total of five regions of the site. These correspond to clustering at the northwest end of the site (Area 1), in the west corner (Area 2), at the northeast side (Area 3), in the south corner (Area 4) and at the southeast end (Area 5) (see Figure 8). The metric attribute of collar height, lip thickness, and basal collar thickness were selected for testing with Student's 't'. The nominal attributes of collar design motif, rim interior design motif, and secondary collar design were selected for cross-tabulation. The motifs of the first two attributes were grouped into the categories that have been described above, while the last attribute was tabulated according to presence or absence.

The statistics were computed by means of the Statistical Package for the Social Sciences (Nie et al., 1975). The metric attributes tested with Student's 't' were found to be fairly homogeneous across the site, with no 't' values being high enough to warrant a significant variation. For the cross-tabulation of the nominal attributes chi square was chosen to compare the frequencies of occurrence of different values of the attributes. A significance value of 0.1 was selected, and any significance value equal to or below 0.1 indicated a significant difference between samples. For the attributes of interior design motif and secondary collar design, no values were computed which were considered to indicate a significant variation. For collar design motif, however, a definite pattern was apparent. The chi square values suggest that Area 2 at the west end of the site was significantly different from all of the other areas of the site. This state of affairs was surprising because it indicates that collar design was homogeneous across all of the site except for one distinct corner. The variation is even more interesting when it is considered that Area 2 correspondes with the location of the two longest structures on the site and what were most likely the living quarters of the largest family groups. The tentative interpretation which is suggested by the author is that the largest family groups on the site were the most powerful, and, thus, were the most distinctive in primary decoration of ceramics. Since the sample is so small, and the provenience data not detailed enough this hypothesis cannot be tested rigorously. It is, however, an interesting application of statistical testing of variation which may find important applications in further studies of data from Iroquoian sites.

Ceramic Pipes

A total of 104 ceramic pipe fragments were recovered from the Southwold site in 1935. These included one whole pipe, 22 analyzable bowls, 17 bowl fragments, 26 stem fragments with the mouthpiece, 32 other stem fragments, and six elbow fragments. The analysis of the pipes follows Emerson's report on the Payne site (Emerson 1966, 181-190), and comparative data was taken from this report and that on the Moyer site (Wagner et al. 1973, 57-74).

The pipes from Southwold were generally well made and fired. A fine grit temper was used in most cases, although some appear to be untempered. The exterior surface ranges from matte to glossy in texture, and ranged from dark brown to orange to oyster white in colour. Table 14 and Table 15 summarize the examples of stem hole manufacture and mouthpiece form. As can be seen from these tables the stems were predominantly tapered with reed stem hole manufacture. Three of the examples of a tapered mouthpiece form were flattened on one side.

The bowls were divided into types following Emerson's ceramic pipe typology. The Iroquois Ring was the predominant type followed by Trumpet. The miscellaneous category contained three poorly made specimens, all of them fairly small. One consisted of a cylindrical bowl with a diameter of only 0.75 cm. The other two had plain slightly bulbous bowls with diameters of 1.15 cm. and 1.2 cm. The 'knobbed' category is not one of Emerson's types, but the two specimens were so distinctive as to require a separate category. They were not classifiable as 'corn-cob' types. There were two bowl fragments that were fairly complete but lacked rims. One of these was most likely an example of Iroquois Ring, but the other is obviously the bottom portion of a decorated vasiform pipe, the only such example found on the site. Table 16 summarizes the metrics of the Southwold pipe bowls. For purposes

of comparison the ceramic pipe data from two other Neutral sites has been selected. These were the Lawson site, which was interpreted by Wright as being closely related to Southwold with respect to pottery (Wright 1966, 86), and the Moyer site, which is located near Kitchener, Ontario, and represents early Neutral occupation in that area (Wagner et al. 1973). Table 17 summarizes the ceramic pipe types of the three sites.

There is a fair amount of variation among the samples of all three sites, but it is apparent that Southwold and Lawson are much more closely related than either of these sites are to Moyer. This relationship becomes more clear when the pipe types are grouped into more general categories of Ring pipes, Trumpet pipes, and Conical pipes.

This may indicate that variation in ceramic pipe types between sites which were closely related in time and space was manifested in change in attributes within broad categories. The difference in bowl height between Iroquois Ring and Elongated Ring may be such an example. Conclusions of this type must remain tentative, however, since the size of the sample from the Southwold site is too small for detailed analysis.

Chipped Lithic Artifacts

The artifacts included in this category are those which were manufactured from chert by means of chipping or flaking. These include projectile points, bifaces, and scrapers. There were no chert drills, perforators or burins represented in the sample. A number of cores and a large amount of chipping detritus is represented in the assemblage but these were not examined in this analysis. The sample as a whole is relatively small and was distributed evenly across the site. The following provides a brief description of the artifacts to accompany Tables 18, 19 and 20. A sample of the artifacts is illustrated in Figure 13.

Projectile Points

This class of artifacts includes 24 unbroken specimens, 12 tip fragments, three midsection fragments and 24 basal fragments. Of these 61 (96.8 per cent) were manufactured from Onondaga chert, one (1.6 per cent) was manufactured from Goat Island chert, and one (1.6 per cent) was manufactured from an unknown variety of chert. The whole specimens consist of five side-notched points, and 19 triangular un-notched points. For the whole side-notched points, the attributes of maximum length, blade length (measured from the tip of the notches to the tip of the point), base length (measured from the top of the notches to the base of the point), shoulder width (the width of the point at the tip of the notches), base width, inter notch width (the width of the shaft between the notches), the maximum thickness, and the weight were measured. For the whole triangular points the attributes of maximum length, base width, maximum thickness, and weight were measured. These measurements are summarized in Table 18. All of the side-notched points are triangular in general shape with straight bases. Nine (47.4 per cent) of the triangular points have straight bases, eight (42.1. per cent) have convex bases, and two (10.5 per cent) have irregular bases.

Bifaces

This class of artifacts includes chert blades which have been worked on both sides, but which are too thick or heavy to have been projectile points. All of the specimens in this class have been manufactured from Onondaga chert. There are 22 complete bifaces and 19 incomplete bifaces in the sample. For the complete specimens five different blade configurations can be discerned: leaf-shaped, triangular, notched, concave-base triangular, and irregular. For the whole bifaces the attributes of maximum length, width, thickness and weight were measured. These measurements are summarized in Table 19.

Scrapers

This class of artifacts contained the largest proportion of specimens in the chipped stone category. There are eighty-six scrapers, all complete and all manufactured from Onondaga chert. This sample includes examples of four different scraper types based on the attributes of artifact shape and situation of the primary working edge. End scrapers have the working edge located perpendicular to the long axis of the artifact, side scrapers have the working edge located parallel to the long axis, thumb-nail scrapers have a minimal difference between the short and long axes and can have the working edge located anywhere on the periphery, and notched end scrapers are end scrapers with notches at the end of the artifact opposite the primary working edge. The attributes of maximum length, width, thickness and weight were recorded. The summary of these measurements is presented in Table 20.

Non-Iroquoian Material

Included in the chipped stone artifacts from the Southwold site are a small number of specimens which do not relate to the Iroquoian occupation of the site area. These consist of two points, six bifaces, and one miscellaneous specimen of unknown use. None of these artifacts is distinctive except for one point which is a bifurcated base point manufactured from Goat Island chert, which most likely dates from the Early Archaic Period. The other point is also manufactured from Goat Island chert but is too fragmentary to identify cultural affiliation. The bifaces are all made of Onondaga chert and possibly date from the Late Archaic Period. The miscellaneous artifact is flat, rectangular in shape, and manufactured from a chalcedony-like material.

Ground and Rough Stone Artifacts

The specimens in this category have been fashioned by a variety of techniques such as flaking, pecking, grinding and drilling. Included are artifacts which were not intentionally manufactured, but represent natural stones which were utilized as tools.

The assemblage is very similar to those from other Neutral sites in southwestern Ontario. An examination of the distribution of these specimens across the site revealed no significant patterns, although this was not surprising considering the size of the collection. A sample of the artifacts is illustrated in Figure 14.

Celts

This class of artifacts consists of axes, adzes and fragments of both which cannot be associated with either class. Included are 3 complete axes, 2 adzes, 4 axe bit ends, 3 mid-shaft and 9 poll ends of celts.

These specimens appear to have been formed, in the preliminary stages of manufacture by flaking and pecking, and, in the final stages by grinding which obliterated most evidence of earlier manufacturing techniques.

The three complete axes are separated from chisels by their larger size. Lengths range from 7.5 cm.-15.4 cm. (\bar{x} = 10.9 cm.), widths from 4.1 cm.-5.6 cm. (\bar{x} = 4.9 cm.), thicknesses from 2.7 cm.-4.1 cm. (\bar{x} = 3.5 cm.) and weights from 208.1 gm. to 449.5 gm. (\bar{x} = 308.3 gm.).

All specimens exhibit pecking at the juncture of the edges and surfaces and this often extends along the edges. This treatment was probably to facilitate hafting of the axe. The specimens also exhibit battering on their poll ends which suggest use of the axe as a hafted wedge or a hammer.

The surfaces of all three specimens and the edges of two exhibit smooth polished surfaces which are probably the result of shaping by grinding.

Two complete specimens have been interpreted as adzes. One is 6.0 cm. long, 3.7 cm. wide, 1.6 cm. thick and weighs 55.7 gm. It has been fashioned by flaking and grinding. While the specimen is almost symmetrical in longitudinal cross-sections, the nature and location of the flake scars suggests that it was hafted as an adze. The specimen is bi-convex in cross-section and has a straight cutting edge.

The second adze is 9.4 cm. long, 5.2 cm. wide, 2.5 cm. thick and weighs 195.2 gm. It was fashioned initially by flaking and pecking with the bit end being finished by grinding. The specimen is concave-convex in cross-section and has a slightly curved cutting edge.

Celt or Chisel Blanks

Eight pieces of igneous rock have been shaped by flaking in such a way to suggest these may be celts or chisels in the process of manufacture.

Chisels

Eleven artifacts have been interpreted as chisels. All have symmetrical longitudinal profiles and are distinguished from axes on the basis of their smaller size. Seven specimens are complete, two are bit ends, one is a bit end fragment and one is a poll end. The complete specimen lengths ranged from 5.5 cm.-6.9 cm. (\bar{x} = 6.6 cm.), widths from 2.1 cm.-3.8 cm. (\bar{x} = 3.1 cm.), thicknesses from 0.8 cm.-1.9 cm. (\bar{x} = 1.4 cm.) and weights from 20 gm.-106 gm. (\bar{x} = 52.9 gm.).

The specimens appear to have been roughly formed by flaking and pecking and then finished by grinding. In all but two cases most evidence for the earlier stages of manufacture has been obliterated by grinding.

Cobble Spall Scraper

A single spall of granitic cobble was recovered which may have functioned as a large scraping tool. It is 6.2 cm. long, 7.2 cm. wide, 2.8 cm. thick and weighs 144.6 gm.

Netsinker

A small flat ovoid cobble was recovered which has had notches formed on its sides by the removal of a series of flakes by percussion flaking. The specimen is 8.1 cm. long, 5.8 cm. wide, 2.0 cm. thick and weighs 148.0 gm. It has been interpreted as a netsinker.

Anvilstone

A single granitic cobble was recovered which has pecking in the center of both its surfaces. This type of wear is normally associated with a flint technology which involves the production of flakes and core tools using the biplan technique. The cobble is 7.8 cm. long, 7.7 cm. wide, 4.3 cm. thick and weighs 381.8 gm.

Pendants and Pendant Blanks

Five small flat stone objects have been interpreted as pendants or blanks for pendants.

One is a small flat pebble which has had a hole drilled, biconically, at one end to allow suspension. The pebble is

3.2 cm. long, 2.4 cm. wide, 0.5 cm. thick and weighs 5.1 gm.

The second specimen is fashioned from a soft mudstone-like material. It has a hole at one end which has been broken. The specimen is 3.4 cm. long, 3.2 cm. wide, 0.9 cm. thick and weighs 19.4 gm.

The third fragmentary pendant is fashioned from shale and has a face on one surface. The eyes were formed by drilling two holes into the surface while the mouth was scraped or gouged out. There are scratches on the top and side edges which may represent hair. The back of the specimen has a series of incised lines which form no recognizable patterns. The hole for suspension is below the mouth. This specimen is 3.9 cm. long, 0.7 cm. thick and weighs 9.4 gm.

Two small triangular specimens may represent pendants in the process of manufacture. One is 4.3 cm. long, 1.8 cm. wide, 0.6 cm. thick and weighs 8.4 gm. While the other is 4.2 cm. long, 2.1 cm. wide, 0.7 cm. thick and weighs 9.0 gm.

Gorget Fragment

A piece of banded Huronia slate has been shaped by grinding and has a single biconically drilled hole. Although fragmentary, it would appear to represent a gorget. This specimen may be from an earlier occupation of the site or may represent a curio found and kept by one of the Neutral occupants of the village.

Faceted Hammerstones

Eleven cobbles have hammering facets on their ends and/or edges. The function of these specimens remain unknown, although they are found on Iroquoian and pre-Iroquoian sites in southern Ontario. For the ten complete specimens, lengths ranged from 6.2 cm.-8.6 cm. (\bar{x} = 7.4 cm.), widths from

5.0 cm.-6.9 cm. (\bar{x} = 6.1 cm.), thicknesses from 3.4 cm.-5.1 cm. (\bar{x} = 4.6 cm.), and weights from 203.8 gm.-415.7 gm. (\bar{x} = 295.2 gm.).

Hammerstones

Ten cobbles have pitting on their edges and/or ends indicating their use as hammers. Of these, three have anvil use on both surfaces and one has anvil use on one surface.

Lengths range from 5.1 cm.-11.3 cm. (\bar{x} = 8.0 cm.), widths from 4.5 cm.-7.1 cm. (\bar{x} = 6.3 cm.), thicknesses from 2.3 cm.-4.9 cm. (\bar{x} = 3.8 cm.) and weights from 83.4 gm.-413.3 gm. (\bar{x} = 295.1 gm.).

Abraders

Fifty pieces of sandstone were recovered which exhibit use wear suggesting they functioned as abraders.

Mortar

A large piece of limestone bears depressions on both its surfaces suggesting it may have been used as a mortar. The specimen is 19.7 cm. long, 17.5 cm. wide, 7.8 cm. thick. The basin-shaped depression on one surface is approximately 8.7 cm. in diameter and 1.7 cm. in depth. A similar depression on the other surface is approximately 12 cm. in diameter and is 1.9 cm. in depth.

Unclassified Ground and Rough Stone

Twenty-eight pieces of ground and rough stone were present in the assemblage which could not be classified and have not been described.

Bone and Antler Artifacts

Sixty-one bone and ten antler artifacts were present in the assemblage from the Southwold site. All but two of these were recovered by Wintemberg in 1935. Generally these artifacts are similar to bone and antler artifacts found on other Neutral sites although the assemblage is limited in both numbers of specimens and variety of artifact classes. For instance, there are no tubular bone beads or pendants. Shell artifacts are completely absent.

An examination of the distribution of these artifacts produced no significant clustering although this is not surprising considering the small size of the assemblage. A sample of the artifacts is illustrated in Figure 15.

Bone Awls

Nineteen complete and 23 fragmentary bone artifacts were recovered which have been interpreted as awls. All specimens are manufactured from splinters of mammal bone. No identification of the type of bone used in the production of these artifacts was attempted. Of the complete specimens, only one had a portion of the articular surface of the bone present as the base of the awl.

For complete specimens, lengths ranged from 3.4 cm.-10.8 cm. (\bar{x} = 7.0 cm.), widths ranged from 0.6 cm.-1.5 cm. (\bar{x} = 1.0 cm.), thicknesses ranged from 0.3 cm.-1.3 cm. (\bar{x} = 0.6 cm.), and weights ranged from 1.0 gm.-7.1 gm. (\bar{x} = 3.1 gm.).

Deer Phalanx Beads

Following Wintemberg (1939, 34) and Wright (1966, 90) ten specimens have been interpreted as beads. These are manufactured from the distal ends of deer phalanges, the articular

surfaces of which have had holes drilled in their surfaces to permit stringing. The lengths of the beads, measured from the articular surface to the surface detached from the remainder of the toe bone, range from 0.9 cm.-1.8 cm. (\bar{x} = 1.2 cm.).

Modified Deer Phalanges

Four deer toe bone artifacts were present in the collection which can be classified as the "cup-and-pin" type. These consist of the distal ends of the toe bones, the articular surfaces of which have been perforated by a small hole. The lengths of these specimens, measured in a manner similar to that described above for the deer phalanx beads, ranged from 3.0 cm.-4.0 cm. (\bar{x} = 3.6 cm.).

Mammal Rib Needles

Two fragments of mammal rib were recovered which are polished on both surfaces. One has a biconically drilled hole at one of its broken ends which suggests these specimens may have served as needles. This specimen is 1.4 cm. wide and 0.3 cm. thick. The other specimen is 1.2 cm. wide and 0.2 cm. thick.

Bear Canine Pendant

A single bear canine was recovered, the most of which has been polished and shaped in such a fashion as to suggest that it probably functioned as a pendant.

Beaver Incisor Chisels

Two small fragmentary beaver incisors were recovered which have been interpreted as chisels. One specimen which is 3.2 cm. long has been split longitudinally. The other is fragmentary but not split longitudinally.

Antler Tine Flaking Tools

Six antler tines have wear on their tips which suggest they were used as flaking tools. For the five complete specimens, lengths range from 5.4 cm.-7.7 cm. (\bar{x} = 6.3 cm.), widths range from 1.3 cm.-2.6 cm. (\bar{x} = 1.9 cm.), while thicknesses range from 0.9 cm.-1.4 cm. (\bar{x} = 1.1 cm.), and weights range from 3.1 gm.-7.8 gm. (\bar{x} = 5.0 gm.).

Modified Antler Tines

Three antler tines were recovered which exhibit wear patterns on their tips. Two specimens (both fragmentary) have rounded tips which are polished, although the source of this is not known and no function can be assigned to these specimens. The third specimen tapers to a broad flat point which is 0.4 cm. wide and bears polish from use. The function of this specimen is unknown.

Antler Bead Stock

A midsection of a piece of antler was recovered which might have been a blank for a bead. Both ends were scored around the circumference of the tine and then broken from the original piece of antler. There is no further modification of this specimen which is 1.3 cm. long, 1.5 cm. wide and 1.2 cm. thick.

Floral Analysis

A limited number of samples were taken from the Southwold site in 1976 to be subjected to flotation processes to recover carbonized plant remains. The objective of floral analysis has not been to provide detailed data on the vegetal diet of the inhabitants of the village, since time and re-

sources do not allow this, but has been rather to produce a preliminary indication of some of the wild plants and cultigens that were being used. The samples were collected from interior house features, such as pits and hearths, and from several interior house support post moulds. Each sample consisted of the entire contents of the feature or post mould being tested. The samples were processed by means of a procedure developed from that suggested by Struever (Struever 1968). The sorting and identification of seeds has been conducted by the author with the aid of comparative samples. Table 21 provides a summary of the edible plants for which carbonized seeds were isolated, and the frequencies of occurrence in each sample. The frequencies for both wild plants and cultigens was very low, but this does not necessarily indicate the extent to which the people living at the Southwold village relied on plants for food. A sample of corn kernels was recovered by Wintenberg's crew in 1935, thereby indicating that corn was used. Since the sample of corn recovered with the flotation technique was as small as the samples of wild plant seeds, it must be assumed that although plants were used, carbonized seeds were not being deposited in the pits. Wright has suggested that such data may indicate that the pits were in use at times of the year when floral resources were not available (Wright 1974, 292). This would explain the paucity of wild plant remains, but not that of corn, which would have been available by means of storage for most of the year. Since no pits were excavated outside of the structures, it was impossible to obtain a comparative sample for flotation. Such a sample may have indicated that pits external to the houses were used during the summer, but without this data it can only be assumed that pits were not used to store or discard floral remains.

Summary and Conclusions

In order to interpret the data relating to the occupation of the Southwold Earthworks village site in terms of the original objectives of the investigations, both intra-site and extra-site relationships have been studied. This interpretation has been rendered difficult for two reasons. First, the nature of the data itself restricts the conclusions which may be reached. Then restrictions arise from the fact that the original excavations by Wintenberg in 1935 were not as detailed or carefully conducted as necessary, and the data which have survived from these excavations is limited and incomplete at best. Also, the excavations conducted in 1976 were initiated on a scale which restricted the amount of data recovered and available resources did not allow for a full treatment of the information. Second, the location of the Southwold site in an area where very little archaeological investigation has been conducted in the past places it in an interpretive vacuum. The closest sites which have been investigated in any detail are too far away for any valid comparisons except for very limited discussion of regional differences; isolated instances of modes of occupation are not indicative of trends of development.

It is possible, however, to propose viable conclusions and hypotheses about the occupation of the Southwold site with reference to the problems which both the 1935 and the 1976 investigations set out to solve. These problems involved the identity of the inhabitants and the date of occupation, the nature of the occupation both interior and exterior to the earthworks, and the relationship of the site to the general occupation of the area.

The occupants of the Southwold site were identified in 1935 as being members of the Neutral nation and the time of habitation was placed at either late in the sixteenth century or early in the seventeenth century. MacNeish has verified this identification of the inhabitants, but, although he does not give a date for the site, he apparently regarded it as being earlier than Wintemberg's estimate (MacNeish 1952, 11). Wright identifies the Southwold site as being representative of the early development of the Neutral division of the Late Ontario Iroquois division and supplies a date of circa A.D. 1500 (Wright 1966, 101). Both MacNeish's and Wright's identifications and dating are based on seriation of rim sherd types. This seriation indicates a relatively high percentage of the Pound Necked type (11 per cent), and also the presence of Middleport Oblique, both of which are early pottery types. No historic items were recovered at the Southwold site during either the 1935 or the 1976 excavations, indicating that, in all probability, the Neutral occupation of the Southwold site ended prior to the period of influence and contact with Europeans. With these indications in mind, the approximate date of A.D. 1500 would appear to be appropriate.

There was some evidence for two other components at the Southwold site. One non-Iroquoian rim sherd, possibly Saugeen, indicates the possibility that the site may have been subject to limited occupation (possibly a winter campsite) during the Middle Woodland period (700 B.C. to A.D. 800).

Several projectile points of non-Iroquoian design suggest that the site was also occupied by Archaic peoples. These points range from large and crude side-notched points of the Brewerton type (Laurentian Archaic) to one bifurcate-base point (Ritchie 1961) indicating that the site may have served as a temporary campsite during the Archaic period. The material from these other components is far too limited to make any further conclusions.

The Neutral occupation of the site included the following aspects. The village consisted of at least 18 longhouse structures, indicated by the outlines of post moulds uncovered during the 1976 excavations. This evidence was generally similar to data found at other Iroquoian sites located in Ontario (Wagner et al. 1973, Wright 1974, Noble 1975, Finlayson 1976), indicating that the inhabitants employed a typical longhouse living structure. These buildings were constructed of saplings placed in staggered lines to form a cigar shaped foundation; the method of roof manufacture is impossible to determine, although the saplings may have been bent over at the top and joined to form the roof. Such a method of manufacture would explain the difference between the post mould diameters of the corners, ends and sides of the structures, since longer saplings, thus having larger bases, would be required for the sides of the buildings. The hearths within the structures were centrally located, bunk lines for sleeping platforms were located along both sides of the structures, and storage compartments were located at both ends of the houses. The length and internal arrangement of the structures attests to their being communally occupied by extended families which varied in size with the length of each structure. The longest of these structures were grouped parallel to one another in the west end of the site, and, as stated above, the rim sherd attributes from this area of the site differed from those of other areas. This may indicate a social grouping of the largest, and possibly the most powerful family groups of the village. The size of the sample of the rest of the artifact assemblage was too small to verify this hypothesis using this material.

The duration of time of occupation of the village remains unclear, although it must have been for some length of time to warrant the construction of the inner ring of the earthworks. Since most of the middens appear to have been located outside of the earthworks and have been almost

completely destroyed by pot-hunting and cultivation, it is impossible to infer any temporal data from their size. The external location of the midden deposits also explains the small size of the artifact assemblage, since none of the deposits remained for excavation during either the 1935 or the 1976 field seasons. Village expansion during the term of occupation would have been greatly restricted by the permanent nature of the fortifications. It is possible, however, that structures may have been re-arranged during the habitation of the site to allow for additional buildings to be constructed. Such a state of affairs would explain the several instances of replacement of structures that occurred at the site. This is notable especially in the case of the houses at the west end of the site where it appears that House 9 was torn down to be replaced by House 5 and House 7. No evidence was recovered for extensions being added to the ends of the structures. Altogether there was not enough data recovered to make concrete statements as to the extent of expansion or whether it occurred because of internal growth or arrival of outsiders.

The available ethnohistorical evidence for the Huron and Neutral subsistence patterns suggests that the people of Southwold probably depended heavily on agriculture supplemented by hunting and fishing. Fairly large numbers of carbonized corn kernels and cob fragments were recovered by Wintemberg in 1935, indicating that corn was the major staple food, although beans and squash were probably also cultivated. The flotation techniques employed in 1976 to investigate the floral contents (Floral Remains) produced a small sample, but indicated that wild plants such as raspberry (Rubus sp.), elderberry (Sambucus sp.), blueberry (Vaccinium sp.), and lambs-quarters (Chenopodium sp.) were being used. The preservation of bone at the site was poor, making the faunal collection small, and resources did not allow a detailed examination of this sample. It is apparent, however, that deer was

the main mammal hunted, and the presence of net-sinkers and fish bones indicates that fishing was practiced, although to what extent remains unknown. There was no evidence in terms of subsistence for seasonal occupation of the village, so it has been assumed that it was occupied on a year-round basis.

It is difficult to infer social activities from material remains, and the nature of the data recovered from the Southwold site renders such inferences even less easy to make. It is possible, however, to make some tentative generalization as to socio-political practices using the available data and what is known of the Iroquois ethnographically. Iroquois society, in general, was based on a highly developed system of cooperative labor and political activities (Trigger 1969, 90). The communal nature of economic activities was indicated by the cooperation involved in hunting, fishing, and agriculture (Champlain 1971, 44-46). Although no evidence for cooperation in these economic activities was recovered at the Southwold site, there were indications of several cases of activity that must have required organized thought and agreement. The physical arrangement and organization of the village is such an example. The defensive tactics (Defence) required that the structures within the earthworks be located and oriented in a particular manner requiring agreement among the builders as to construction procedures. It is evident that the construction of the earthworks would have required a large expenditure of human energy and time. In order for the walls to be built effectively, the labor force would have to have been organized to perform the task. Another example is the method of garbage disposal employed at the Southwold site. It is evident that most of the garbage was carried to areas outside of the site as opposed to the much easier method of dumping debris at the ends of structures inside the village. This would also have required agreement among the occupants as to keeping the open areas

within the village clear. The largest such open area appears to have been located in the center of the village, where no evidence of structures or middens was recovered during excavation. This open space or plaza could have been used as a communal activity area or meeting place. This was probably one method of emphasizing social cohesion by supplying a particular space, within the confines of the village, which could be used for any kind of communal activity. Another such institution to emphasize integration may have been the burial practices employed by the inhabitants of the village. There was very little evidence for burials within the village itself. It must be assumed that burial took place outside of the village, possibly in an ossuary, although such a site has not been located for Southwold. It is stated by the Jesuits (Summary of Ethnographic Data on the Neutral) that the historic Neutral practiced the Feast of the Dead funerary ritual. This ceremony, by means of communal burial, served to emphasize the social integration that was highly important in Iroquoian society.

Comparison of the Southwold village with other Neutral villages and discussion of the site as a constituent of its own area must be very limited because of lack of data. The site which was closest to the Southwold site both temporally and spatially is the Lawson site. On the basis of rim sherds types, both Wright and MacNeish have classified Southwold and Lawson as being closely related (Typological Analysis). The Lawson site is, however, located too far away (25 miles) from the Southwold site to have been part of the same community development. It is unfortunate the bodies of data from the two sites are too disparate for detailed comparison, since it is likely that they were examples of two separate although related trends of Neutral development. There are some attributes of the site, however, which can be compared. The general physical locations of the two villages contrasts greatly. While the Southwold site was located on flat ground

with access to only a minor creek for water supply, the Lawson site was located on a high bluff above two streams, one of which was a major drainage. The use of earthworks was much more important at Southwold than at Lawson. There was obviously a difference in defensive tactics and priorities but, since there is no data available on structures at the Lawson site, no detailed conclusions can be reached on this difference. While the ceramic pipe types from the two sites are related there were still some important differences (Ceramic Pipes) indicating that, although rim sherds type percentages were closely related, other artifact types may not have been as similar. It is possible that distance from Lake Erie could be a defining factor in development, with northern and southern representatives, but without further data this hypothesis must remain very tentative.

The only other Neutral village for which published data is available is the Moyer site located near Kitchener, Ontario. This site has been dated as prehistoric and earlier than the Lawson site (Wagner et al. 1973, 86) and, therefore, was most likely occupied in approximately the same time period as the Southwold site. Since the results of the analysis of data on pottery from the Moyer site has not been published and time did not allow a separate analysis by the present investigator, comparison of data from these two sites is greatly hindered. The ceramic pipes, however, show marked differences in type percentages (Table 17) with completely distinct types being emphasized at one site as opposed to the other. Although the settlement pattern data recovered from Moyer is incomplete there are some differences and similarities. The Moyer site was located on an uneven portion of land bordered on two sides by slopes. The shape of the village indicated by an excavated portion of palisade was uneven perhaps to suit the topography. These attributes contrast with the location and shape of the Southwold village.

The structures at the Moyer site were considerably larger than those at the Southwold site. The mean length of the Moyer houses was 51.75 m. with a range of from 22.6 m. to 93.3 m. and the mean width was 8.18 m. with a range of from 8.0 m. to 8.4 m. The mean length of the Moyer houses was nearly twice that of those at Southwold (28.5 m.) and the mean width of the Moyer houses was 2.28 m. more than that of the Southwold structures (5.9 m.). The shapes of the ends of the houses at the two sites were, however, very similar, both having predominantly flat ends with rounded or bevelled corners. There was also some similarity in arrangement of structures. The houses at the Moyer site are grouped into clusters with parallel orientation much as structures were at the Southwold site. Whether or not these clusters were arranged for purposes of defence remains unclear.

It is clear that detailed comparison of the Southwold site with other Neutral villages could be very fruitful in defining trends of regional development. Obviously much more data is required before such comparison can be accomplished. This data can be acquired only through the definition and investigation of temporal and spatial community development. Such information is required to indicate whether or not the habitation of the Southwold site was typical of the Neutral occupation of the area, and to what degree this occupation differed from that of other areas. Detailed archaeological survey is required to deal with several important problems. It remains to be known if the defensive tactics employed at the Southwold site were also used at other related villages as well as other practices associated with settlement pattern. The relationship between the external "traders' site" and the main site should be defined, and it should be determined whether it was the only one. There is also the possibility that there were associ-fishing camps close to the lake, which might be isolated by future surveys.

It also is unclear as to whether or not the inhabitants practiced ossuary interment. Without these data, the interpretation of the Southwold site must remain limited.

Table 1. Depths and Diameters of Palisade Post Moulds (in cm.)

Row	Depth 1*	Depth 2#	Diameter
Outer	80	9	7
Outer	84	13	8
Outer	81	10	8
Inner	78	9	8
Inner	78	12	10
Inner	76	8	7
Inner	69	9	10
Inner	69	9	8
Inner	69	9	10
Inner	69	9	10

*Depth 1 Depth from present day surface

#Depth 2 Depth from exposed subsoil

Table 2. Structure Data Summary

Designation	Orientation	Length (in m.)	Width (in m.)	Overlapping
House 1	NW. to SE.	23.25	6.30	--
House 2	NW. to SE.	--	5.0	--
House 3	NW. to SE.	26.5	6.5	--
House 4	NW. to SE.	--	6.0	--
House 5	NE. to SW.	8.0	5.25	--
House 6	NW. to SE.	49.5	5.75	House 9
House 7	NW. to SE.	46.5	6.25	House 9
House 8	NW. to SE.	16.0	6.4	--
House 9	NW. to SE.	35.5	5.75	House 6- House 7
House 10	NW. to SE.	--	--	--
House 13	NE. to SW.	11.5	--	House 14
House 14	NE. to SW.	25.5	--	House 13
House 15	NE. to SW.	22.5	--	House 21
House 18	N. to S.	--	5.0	--
House 20	NW. to SE.	--	--	--
House 21	NE. to SW.	--	--	House 15
House 22	N. to S.	--	--	--
House 24	N. to S.	--	--	--

Table 3. Feature Summary For House 1

Type	Length (in cm.)	Width (in cm.)	Depth (in cm.)	Volume (in l.)	Plan	Profile
Pit	47	40	9	12	Ovate	Basin
Pit	--	56	13	10	Circular	Irregular
Pit	40	33	15	12	Ovate	Basin
Pit	51	47	13	22	Ovate	Basin
Pit	--	22	29	10	Circular	Irregular
Pit	51	34	33	28	Ovate	Basin
Pit	28	21	30	22	Ovate	Basin
Hearth	47	36	--	--	--	--

Table 4. Feature Summary For House 8

Type	Length (in cm.)	Width (in cm.)	Depth (in cm.)	Volume (in l.)	Plan	Profile
Pit	--	52	10	8	Circle	Basin
Pit	56	32	10	18	Ovate	Basin
Pit	39	31	8	4	Ovate	Irregular
Pit	41	36	16	--	Ovate	Basin
Pit	--	30	13	--	Circle	Basin
Pit	52	38	12	--	Ovate	Basin
Pit	35	30	30	--	Ovate	Irregular
Pit	36	30	8	--	Ovate	Basin
Hearth	77	60	--	--	Ovate	--
Hearth	--	--	--	--	Inde- terminate	--
Hearth	140	76	--	--	Ovate	--

Table 5. Summary of Mean Dimensions of All Pits

	Ovate	Circular	Ovate Acuminate	Irregular
Mean Length (in cm.)	41.3	--	41.0	66.4
Mean Width (in cm.)	31.7	33.1	33.0	44.2
Mean Depth (in cm.)	13.9	17.0	13.0	13.3
Mean Volume (in l.)	13.7	10.0	11.0	2.0

Table 6. Frequency of Pit Shapes

	Ovate	Circular	Ovate Acuminate	Irregular
Basin	13	6	1	1
Conical	--	1	--	--
Irregular	3	2	--	2
Indeterminate	2	--	--	2

Table 7. Summary of Material Recovered From the Southwold Site in 1935 and 1976

Kind of Specimen	Number	Kind of Specimen	Number
Rim Sherds	502	Hammerstones	10
Pottery Fragments	10,711	Abraders	50
Ceramic Beads	1	Mortar	1
Lumps of Clay	49	Unclassified Ground and Rough Stone	28
Ceramic Pipe Fragments	104	Bone Awls	42
Projectile Points	65	Deer Phalanx Beads	10
Bifaces	47	Modified Deer Phalanges	4
Scrapers	86	Mammal Rib Needles	2
Utilized Flakes	68	Bear Canine Pendant	1
Chipping Detritus	1,234	Beaver Incisor Chisels	2
Celts	19	Antler Tine Flaking Tools	6
Celt or Chisel Blanks	8	Modified Antler Tines	3
Chisels	11	Antler Bead Stock	1
Cobble Spall Scraper	1	Human Bone	5
Netsinker	1	Bone and Shell Fragments	189
Anvilstone	1	Charcoal	111
Pendants and Pendant Blanks	5	Miscellaneous Recent Material	19
Gorget Fragment	1		
Faceted Hammerstones	11		

Table 8. Summary of Measurements of Rim Sherds (in mm.)

	Collar Height	Lip Thickness	Basal Collar Thickness
Mean	19.3	7.6	9.9
Range	4.0 to 310.0	2.0 to 71.0	4.0 to 30.0
	n = 472	n = 502	n = 471

Table 9. Exterior Collar Design Motif Frequencies

	Simple	Horizontal	Opposed	Complex	Plain	Indeterminate
Frequency	303	2	50	1	106	10
Percentage	64.2	0.4	10.6	0.2	22.5	2.1
	n = 472					

Table 10. Exterior Collarless Design Motif Frequencies

	Simple	Horizontal	Opposed	Complex	Plain
Frequency	10	1	1	2	16
Percentage	53.3	33.3	3.3	3.3	6.7
	n = 30				

Table 11. Interior Design Motif Frequencies

	One or More Rows of Vertical Slashes	Triangular or Elongated Punctates	Incised Lines	Plain
Frequency	19	149	4	330
Percentage	3.8	29.7	0.8	65.7
	n = 502			

Table 12. Cross Tabulation of Collar Design Motif and Neck Design Motif

Neck Design Motifs	Collar Design Motifs				
	Simple	Horizontals	Opposed	Complex	Plain
Simple	3	--	--	--	--
Horizontals	60	2	9	--	--
Horizontal Slashes	1	--	--	--	--
Complex	1	--	--	--	--
Plain	237	--	40	1	105
	n = 459				

Table 13. Rim Sherd Type Frequencies for the Southwold and
Lawson Sites (MacNeish 1952, 12)

Type	Southwold		Lawson	
	Frequency	Percentage	Frequency	Percentage
Middleport Oblique	1	-		
Pound Blank	6	1		
Ontario Horizontal	9	2	7	1
Ripley Plain	29	6	10	2
Niagara Collared	97	18	108	19
Lawson Incised	255	50	308	56
Pound Necked	71	14	65	11
Lawson Opposed	<u>49</u>	<u>9</u>	<u>62</u>	<u>11</u>
Totals	517	100	560	100

Table 14. Ceramic Pipe Stem Hole Manufacture Frequencies

Technique	Frequency	Percentage
Reed	48	96.0
Twisted Fiber	<u>2</u>	<u>4.0</u>
Total	50	100.0

Table 15. Ceramic Pipe Mouthpiece Form Frequencies

Mouthpiece Form	Frequency	Percentage
Tapered	24	92.4
Ground	1	3.8
Bulbous	<u>1</u>	<u>3.8</u>
Total	26	100.0

Table 16. Ceramic Pipe Bowl Measurements (in cm.)

	Lip Thickness	Orifice Diameter	Bowl Height
Mean	0.43	1.95	2.44
Range	0.2 to 1.6	0.75 to 3.6	1.4 to 3.1

Table 17. Ceramic Pipe Types From the Southwold, Lawson and Moyer Sites

Type	Southwold Frequency	Percentage	Lawson Frequency	Percentage	Moyer Frequency	Percentage
Decorated Trumpet			1	.99	1	.66
Iroquois Plain Trumpet	3	13.6	12	11.89	70	46.05
Ring Trumpet	1	4.5			25	16.44
Flaring Trumpet			3	2.97		
Collared Plain			1	.99		
Collared Ring	2	9.1	7	6.93		
Collared Collared Miniature			2	1.91		
Decorated Vasiform			2	1.99	1	.66
Conical Miniature			9	8.91		

Table 17. Ceramic Pipe Types From the Southwold, Lawson and Moyer Sites (cont'd.)

Type	Southwold Frequency	Percentage	Lawson Frequency	Percentage	Moyer Frequency	Percentage
Conical Plain	2	9.1	5	4.95	7	4.60
Conical Ring			3	2.97	11	7.23
Elongated Ring	1	4.5	30	29.70	11	7.23
Iroquois Ring	8	36.4	14	13.86	14	9.21
Crude					9	5.92
Effigy			8	7.92		
Miscellaneous	<u>5</u>	<u>22.7</u>	<u>4</u>	<u>3.96</u>	<u>3</u>	<u>1.97</u>
Totals	22	100.0	101	100.00	138	100.00

Table 18. Summary of Metric Data for Projectile Points

		Side-Notched n = 5	Triangular n = 19
Maximum Length (cm.)	Mean	3.62	3.44
	Range	2.4-5.0	2.1-5.2
Blade Length (cm.)	Mean	2.60	
	Range	1.3-3.9	
Base Length (cm.)	Mean	1.02	
	Range	0.7-1.2	
Shoulder Width (cm.)	Mean	1.5	
	Range	0.7-1.2	
Base Width (cm.)	Mean	1.7	1.67
	Range	1.6-1.9	1.3-2.9
Inter Notch Width (cm.)	Mean	0.82	
	Range	0.7-1.0	
Maximum Thickness (cm.)	Mean	0.44	0.61
	Range	0.4-0.6	0.3-0.8
Weight (gm.)	Mean	2.2	2.86
	Range	1.6-3.3	0.9-8.7

Table 19. Summary of Metric Data for Bifaces

		Leaf n = 11	Triangular n = 5	Side-Notched n = 2	Concave Base Triangular n = 1	Irregular n = 3
Length (cm.)	Mean	4.42	3.5	4.0	4.8	4.33
	Range	2.6-6.3	3.2-3.7	2.8-5.2	-	3.3-5.2
Width (cm.)	Mean	2.48	2.62	2.05	2.8	2.33
	Range	1.5-3.1	2.0-3.7	1.3-2.8	-	2.1-2.7
Thickness (cm.)	Mean	0.79	0.86	0.7	1.3	1.07
	Range	0.6-1.3	0.6-1.1	0.5-0.9	-	0.6-1.4
Weight (gm.)	Mean	8.64	7.58	5.8	20.5	9.2
	Range	2.4-17.6	4.1-13.0	1.9-9.7	-	4.4-14.0

Table 20. Summary of Metric Data for Scrapers

		End Scrapers n = 45	Side Scrapers n = 29	Thumb-Nail Scrapers n = 10	Notched End Scrapers n = 2
Length (cm.)	Mean	4.23	3.72	2.86	5.05
	Range	2.4-6.2	2.7-5.4	2.1-3.7	4.1-6.0
Width (cm.)	Mean	2.63	2.63	2.49	3.65
	Range	1.6-3.8	2.0-4.1	1.8-3.1	3.6-3.7
Thickness (cm.)	Mean	1.32	1.07	0.75	1.05
	Range	0.8-2.8	0.4-1.6	0.5-1.1	0.9-1.2
Weight (gm.)	Mean	14.34	11.56	5.45	18.3
	Range	5.0-56.1	2.3-25.5	2.3-13.1	14.1-22.5

Table 21. Summary of Frequencies of Carbonized Seeds
Recovered in 1976

Genus	Frequency	Percentage
Rubus	4	4.4
Vaccinium	7	7.8
Sambucus	2	2.2
Ruus	14	15.6
Chenopodium	4	4.4
Zea	33	36.7
Unidentified	<u>26</u>	<u>28.9</u>
Total	90	100.0

References Cited

Boyle, David

1891

"The Southwold Earthworks." Annual Archaeological Report.
Appendix to the Report of the Minister of Education, Ontario,
pp. 8-10. Toronto.

Canadian Illustrated News

1877

Vol. 15, No. 3 (20 Jan.) pp. 34-36. Montreal.

Champlain, Samuel de

1922-1936

The Works of Samuel de Champlain. Ed. H.P. Biggar.
The Champlain Society, Toronto. 6 vols.

Coyne, James H.

1893

"The Southwold Earthwork and the County of the Neutral."
Annual Archaeological Report. Appendix to the Report of the
Minister of Education, Ontario, pp. 22-34. Toronto.

Emerson, J. Norman

1966

"The Payne Site: An Iroquoian Manifestation in Prince Edward
County, Ontario." National Museum of Canada, Bulletin No. 206,
Ottawa.

Finlayson, William D. et al.

1973

"Report on the Excavations at Crawford Lake." Report submitted to the Minister of Culture and Recreation, Queen's Park, Toronto.

1976

"The 1975 Investigations in the Crawford Lake Region." Report submitted to the Minister of Culture and Recreation, Queen's Park, Toronto.

Garrad, Charles

1971

"Ontario Fluted Point Survey." Ontario Archaeology, No. 16, pp. 3-18. Toronto.

Harris, William R.

1901

"The Flint Workers: A Forgotten People." Annual Archaeological Report. Appendix to the Report of the Minister of Education, Ontario, pp. 25-36. Toronto.

Heidenreich, Conrad E.

1971

Huronian: A History and Geography of the Huron Indians 1600-1650. McClelland and Stewart, Toronto.

Hunt, George T.

1939

The Wars of the Iroquois. The University of Wisconsin Press, Madison.

Jesuits. Letters from Missions (North America).

1896-1901

The Jesuit Relations and Allied Documents. Ed. R.G. Thwaites. The Burrows Brothers Company, Cleveland. 73 vols.

Johnston, Richard B.

1968

"The Archaeology of the Serpent Mounds Site." Royal Ontario Museum Art and Archaeology, Occasional Paper No. 10. Toronto.

Jury, Elsie M.

1974

"The Neutral Indians of Southwestern Ontario." Bulletin of the Museums, The Museum of Indian Archaeology, University of Western Ontario, No. 13. London, Ontario.

Jury, Wilfrid W.

1941

"Clearville Prehistoric Village Site in Oxford Township, Kent County, Ontario." Bulletin of the Museums, The Museum of Indian Archaeology, University of Western Ontario, No. 2, London, Ontario.

1944

"Southwold." Manuscript on file at the Museum of Indian Archaeology, University of Western Ontario, London, Ontario.

1946

"Southwold Prehistoric Earthworks." The Canadian Historical Review, Vol. 27, No. 4, (Dec.), pp. 391-393. Toronto.

MacDonald, George

1951

"A Survey of Sites in the Galt Area." Manuscript on file at the National Museum of Man, Ottawa.

MacNeish, Richard S.

1952

"Iroquoian Pottery Types: A Technique for the Study of Iroquois Prehistory." National Museum of Canada, Bulletin No. 124, Ottawa.

Nei, Norman et al.

1975

Statistical Package for the Social Sciences. McGraw-Hill,
New York.

Noble, William C.

1975a

"Van Besien (AfHd-2): A Study in Glen Meyer Development."
Ontario Archaeology, No. 24. Toronto.

1975b

"Canadian Prehistory: The Lower Great Lakes - St. Lawrence
Region." Canadian Archaeological Association Bulletin, No. 7,
pp. 96-121. Ottawa.

Ramsden, Peter G.

1977

"A Refinement of Some Aspects of Huron Ceramic Analysis."
National Museum of Man, Archaeological Survey of Canada,
Paper No. 63. Ottawa.

Ridley, Frank

1961

Archaeology of the Neutral Indian. Etobicoke Historical
Society, Etobicoke, Ontario.

Sagard, Gabriel

1939

The Long Journey to the Country of the Hurons. Ed. G.M. Wrong.
The Champlain Society, Toronto.

Spence, Michael W. et al.

1976

"The Boyd Site." Report submitted to the Minister of Culture
and Recreation, Queen's Park, Toronto.

Storck, Peter L.

1972

"An Unusual Late Palaeo-Indian Projectile Point from Southern Ontario." Ontario Archaeology, No. 18, pp. 37-45. Toronto.

1974

"The Barest Trace: New Developments in the Search for Early Man in Ontario." Rotunda, Vol. 7, No. 1, pp. 5-9. Toronto.

Struever, Stewart

1968

"Flotation Techniques for the Recovery of Small-Scale Archaeological Remains." American Antiquity, Vol. 33, No. 3, (July), pp. 353-362. Washington, D.C.

Tooker, Elizabeth

1964

"An Ethnography of the Huron Indians, 1615-1649." Bureau of American Ethnology, Bulletin No. 190. Washington, D.C.

Trigger, Bruce G.

1969

The Huron: Farmers of the North. Holt, Rinehart and Winston, New York.

Wagner, Norman F., L.E. Toombs and E.R. Riegart

1973

"The Moyer Site: A Prehistoric Village in Waterloo County." Wilfrid Laurier University Publications, Waterloo, Ontario.

Wintemberg, William J.

1935

"Preliminary Report on the Exploration of the Southwold Earthworks, Elgin County." National Museum of Man, MS. No. 195, Ottawa.

Wintenberg, William J.

1939

"Lawson Prehistoric Village Site, Middlesex County, Ontario."
National Museum of Canada, Bulletin No. 94. Ottawa.

Wright, James V.

1966

"The Ontario Iroquois Tradition." National Museum of Canada,
Bulletin No. 210. Ottawa.

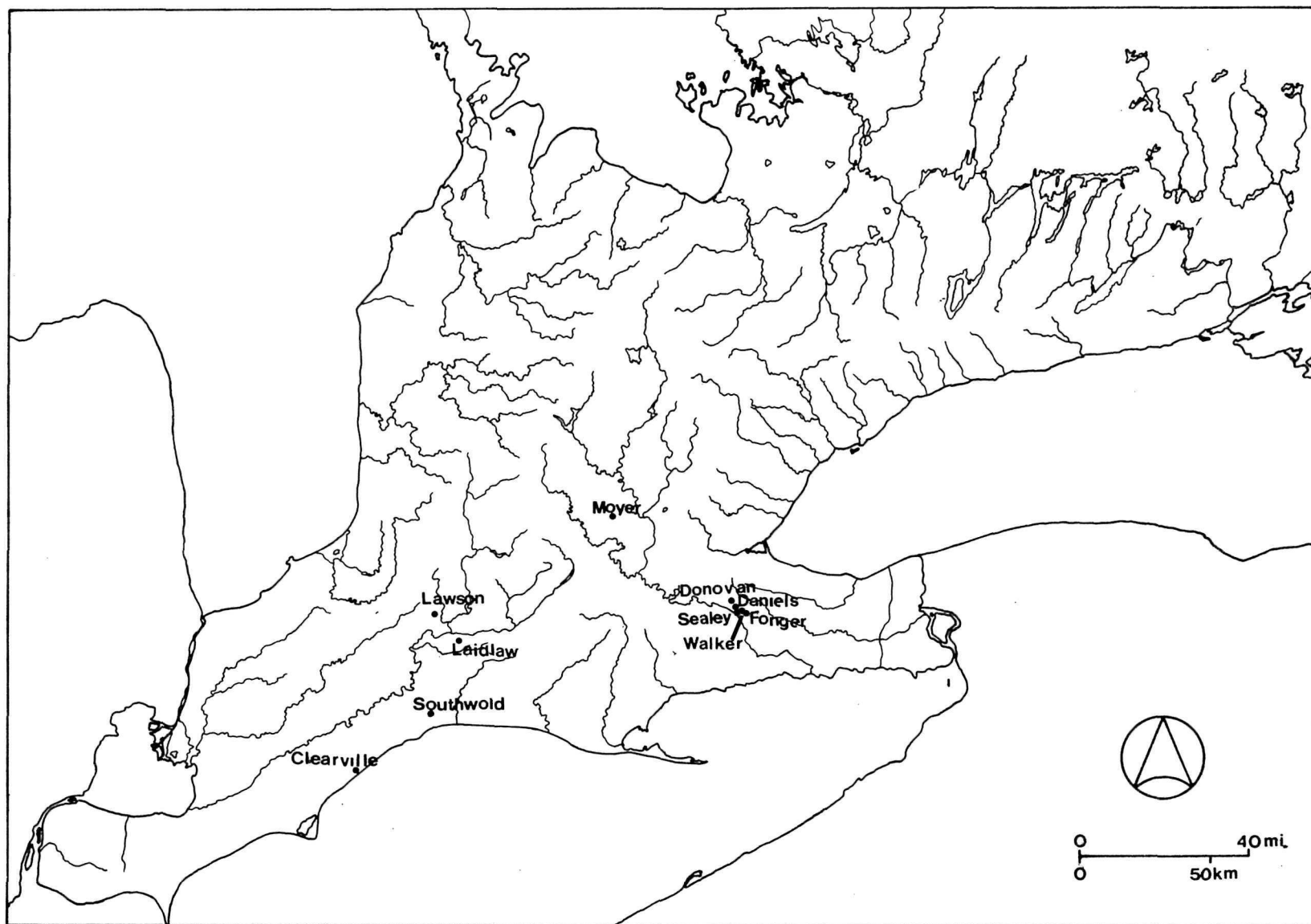
1972

Ontario Prehistory: An Eleven-Thousand-Year Archaeological
Outline. National Museums of Canada, Ottawa.

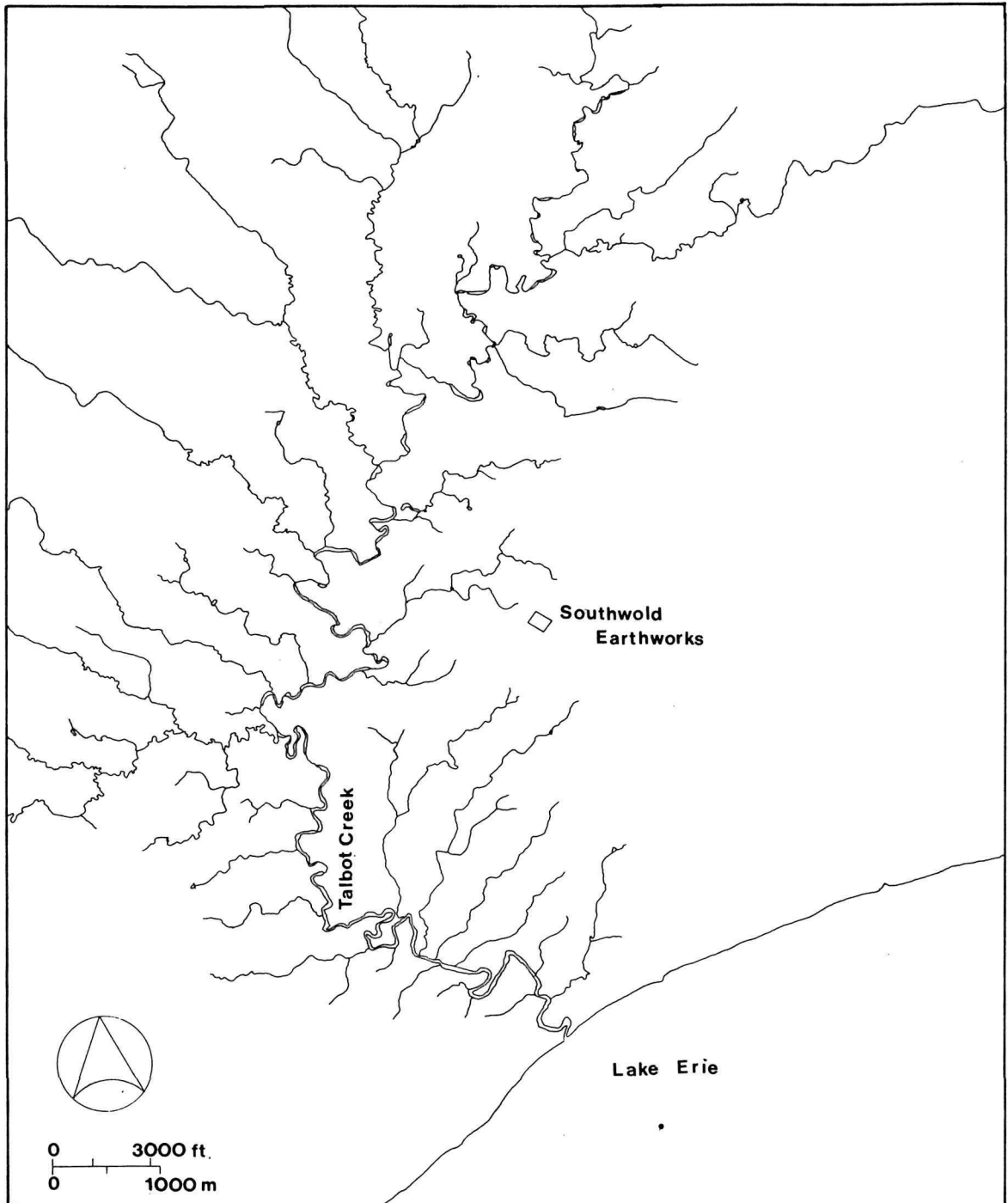
1974

"The Nodwell Site." National Museum of Man, Archaeological
Survey of Canada, Paper No. 22. Ottawa.

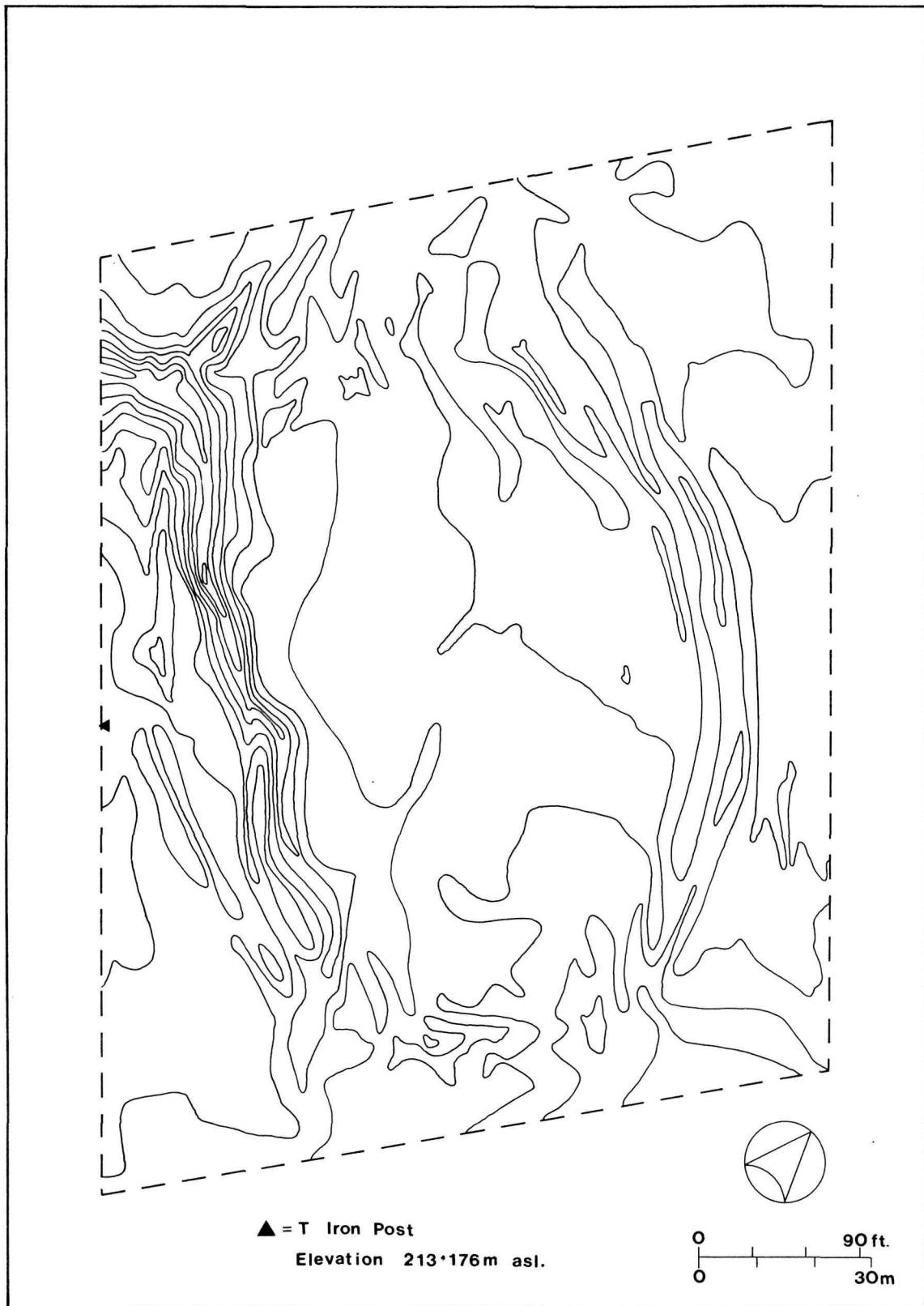
- 1 Excavated Neutral Sites in Southwestern Ontario.



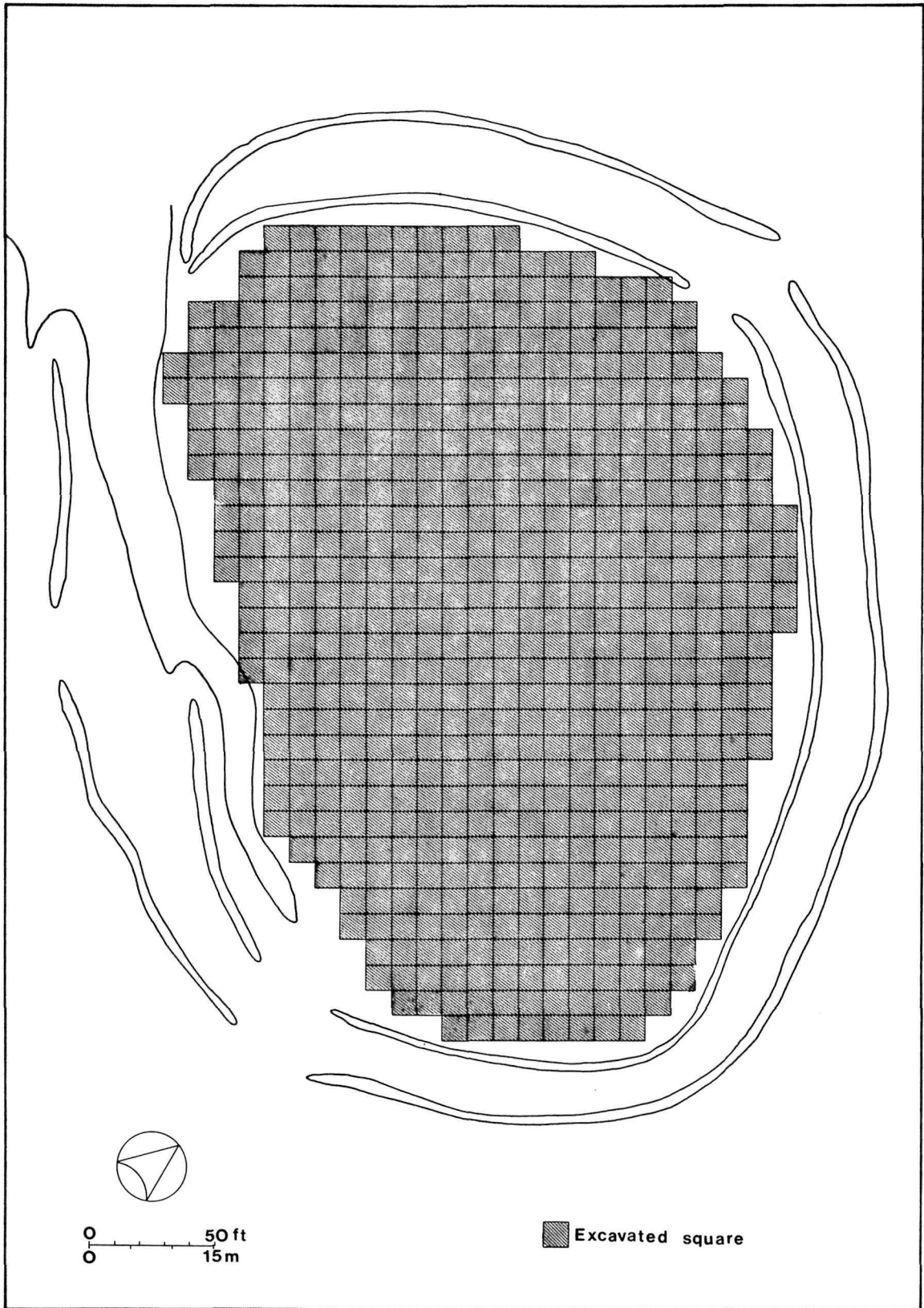
- 2 Map Showing Location of Southwold Site Within the Talbot Creek Drainage System.



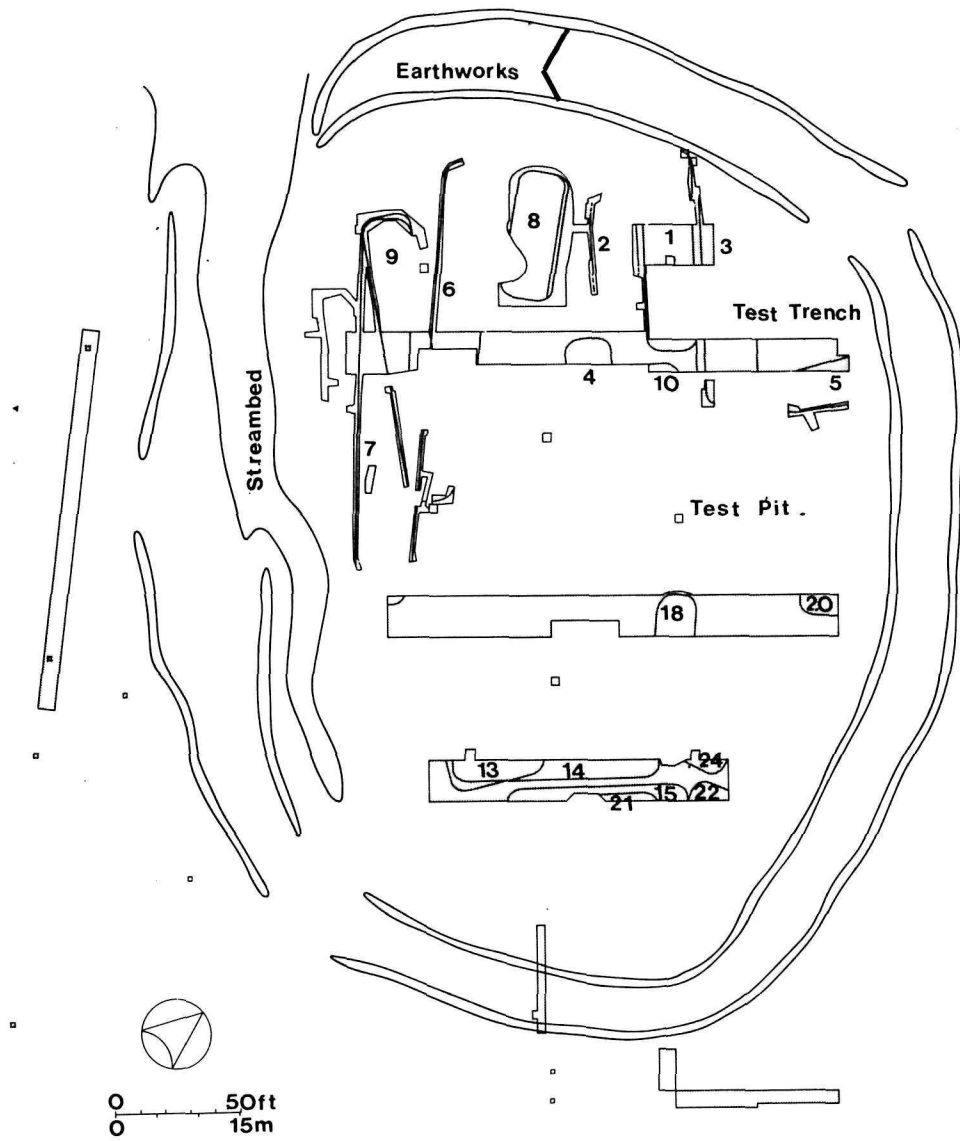
3 Topographic Map of the Southwold Site.



4 Map of Area of Excavations at the Southwold Site, 1935.

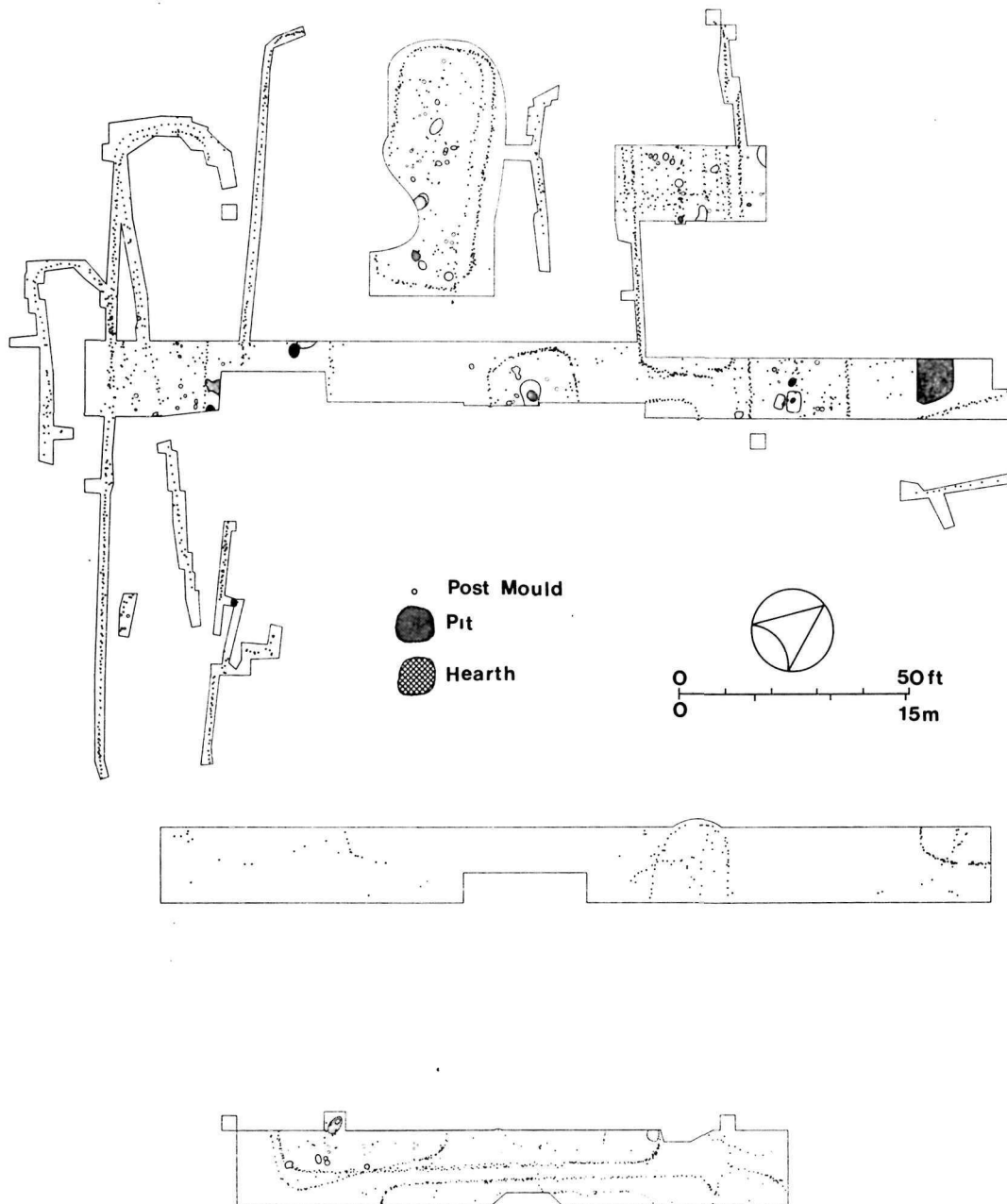


5 Map of the Excavations at the Southwold Site, 1976.

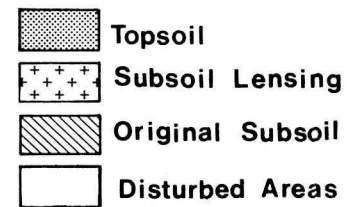
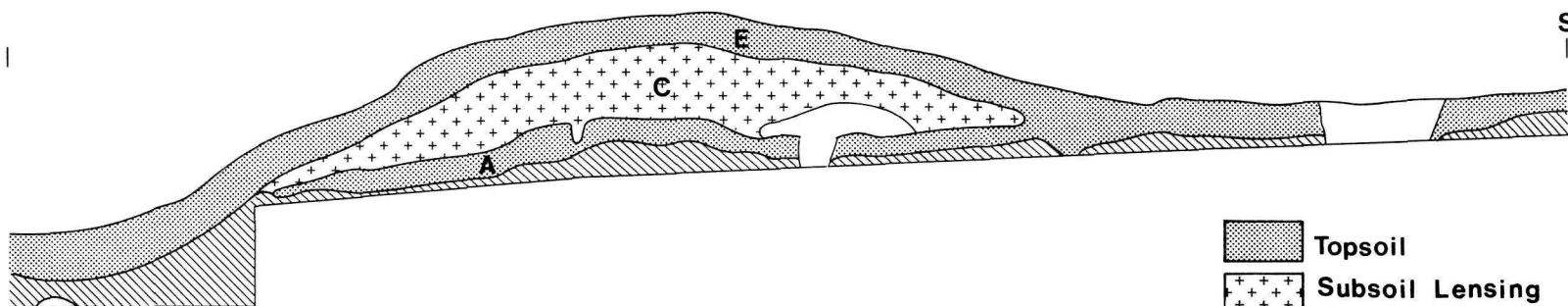
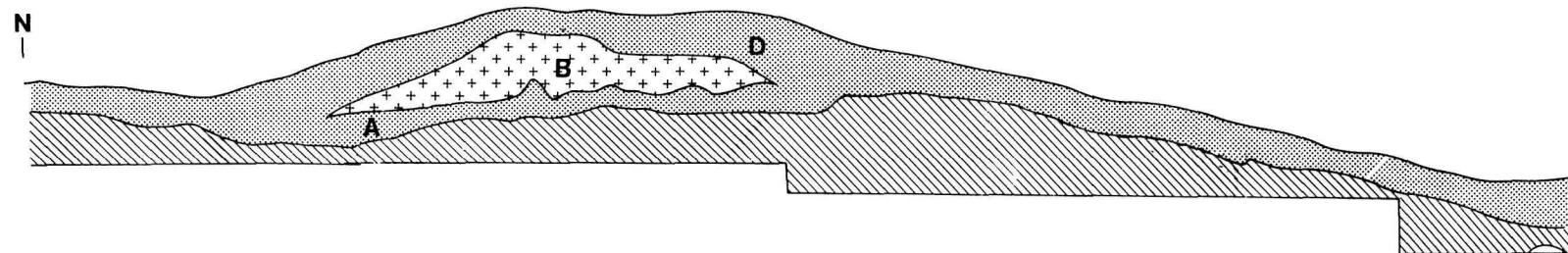


1=House Number

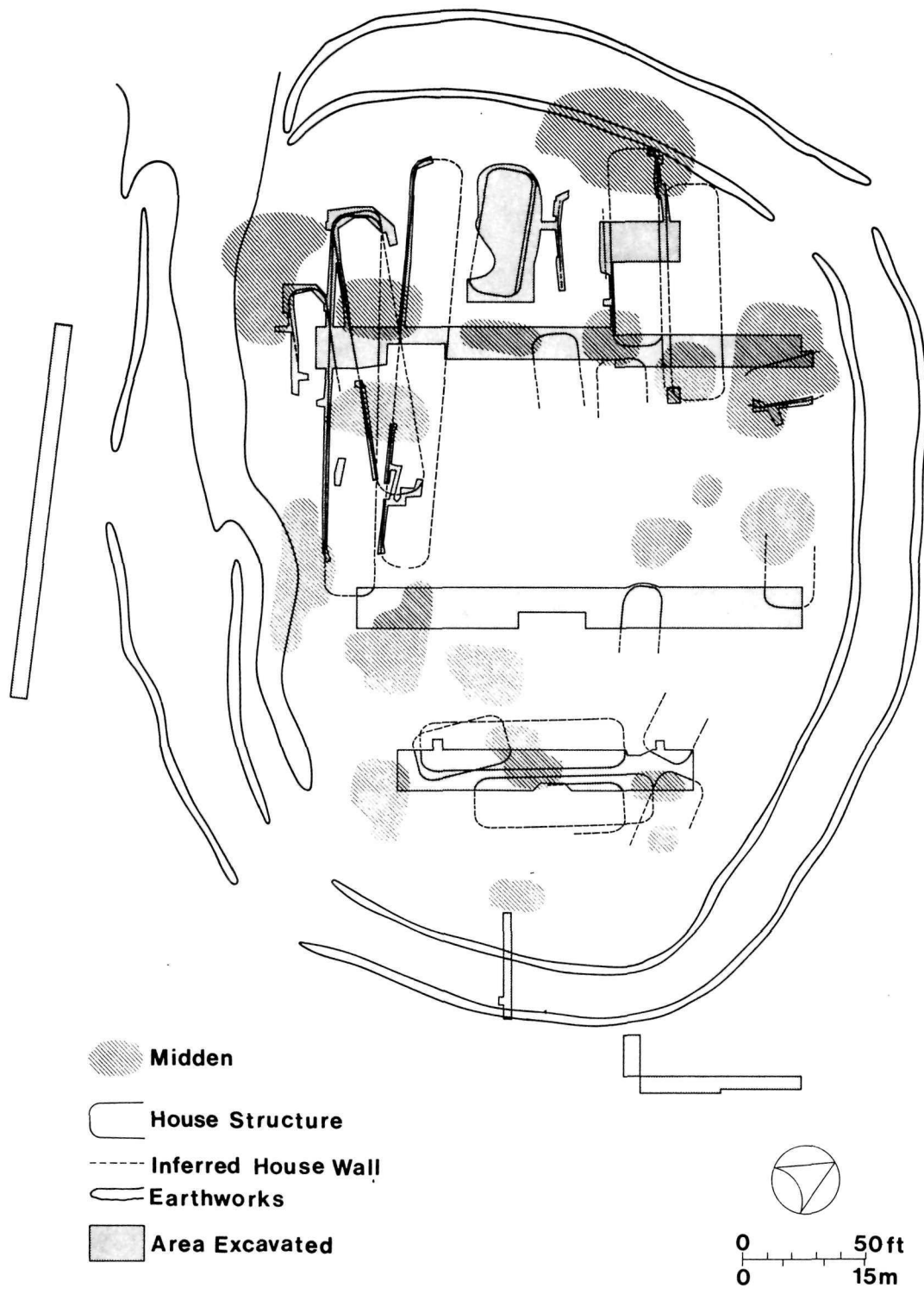
- 6 Detailed Map Showing Post Moulds and Features of House Structures Investigated in 1976.



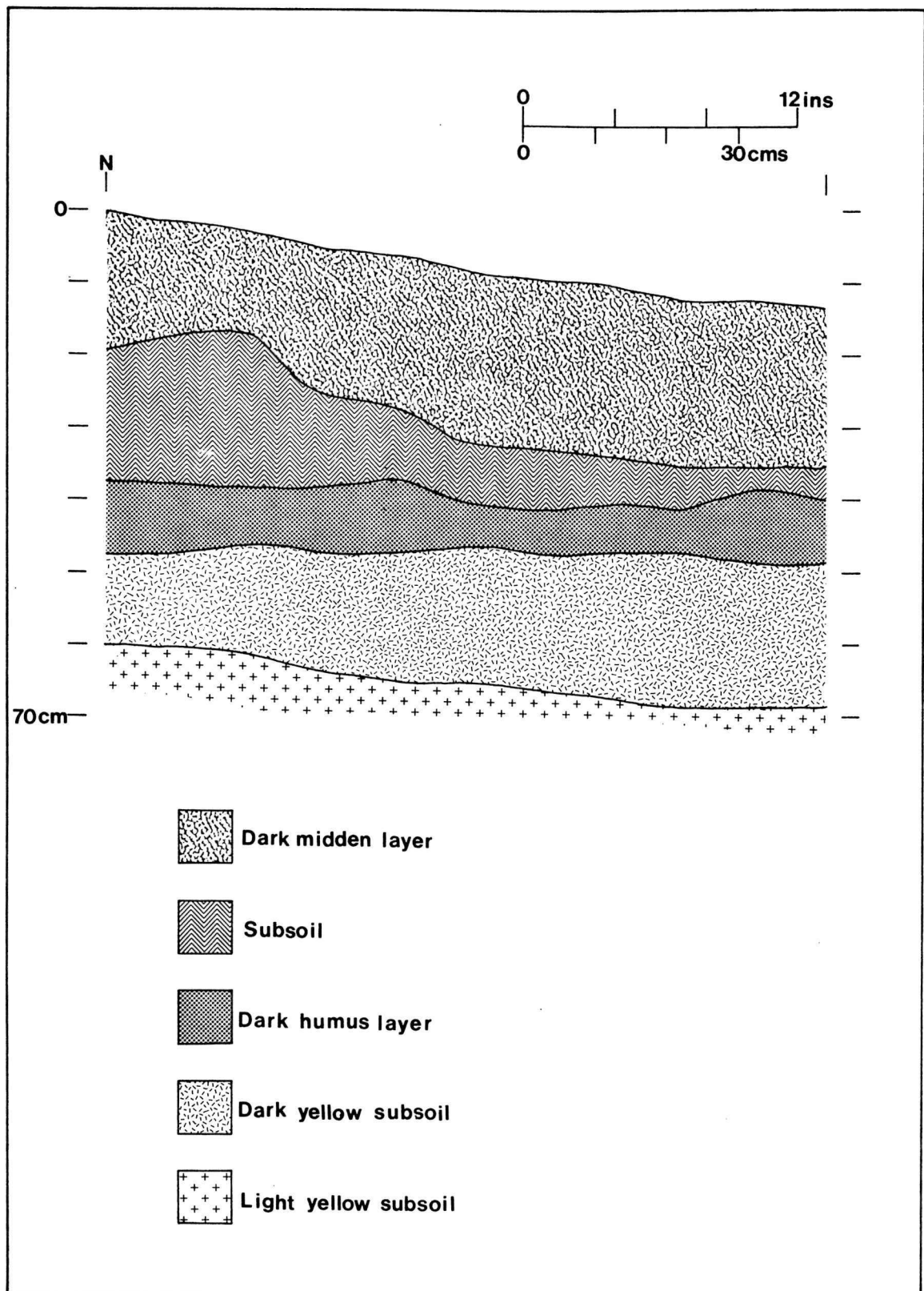
- 7 Cross-section of the Earthworks (East Face of Test Trench at South End of Site).



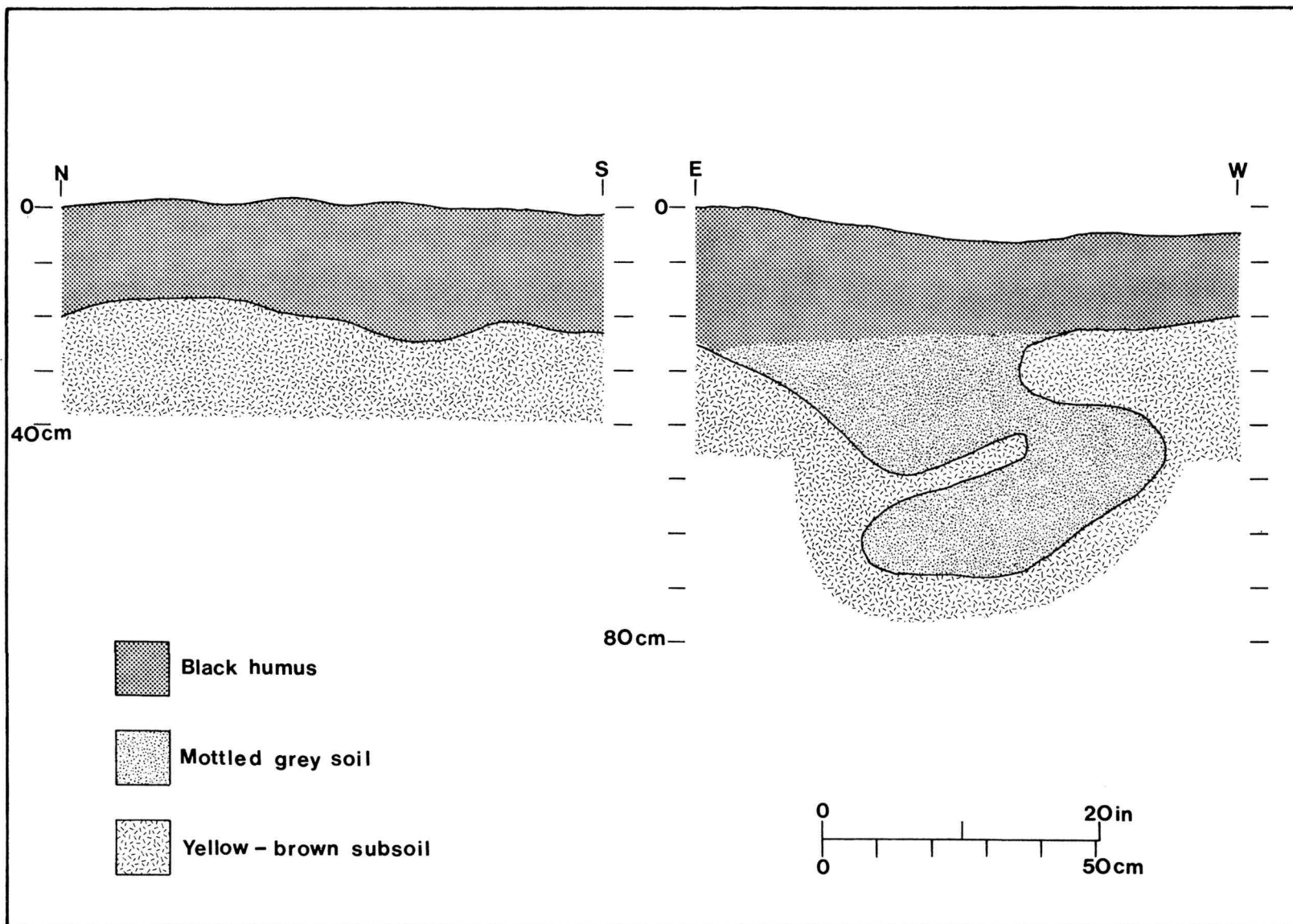
8 Interpretative Map of the Southwold Site.



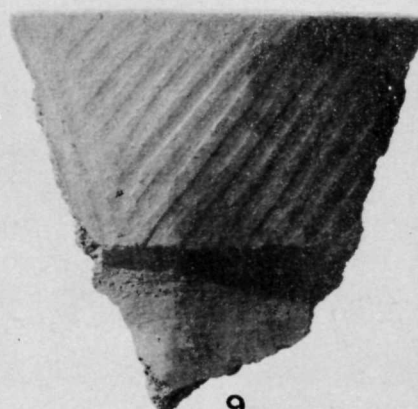
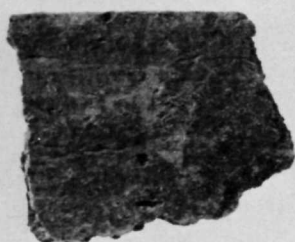
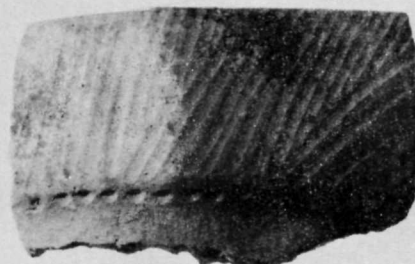
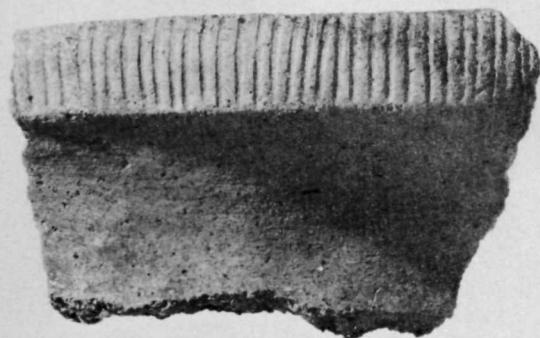
9 Profile of Test Pit 1 (East Face).



- 10 Profiles of Test Pit Dug Into Earthworks (East and South Faces).



11 Rim Sherds From the Southwold Site.



12 Ceramic Pipes From the Southwold Site.



1



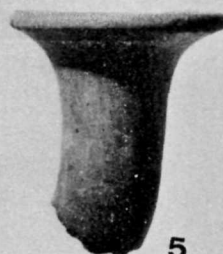
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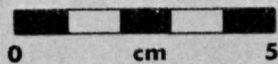
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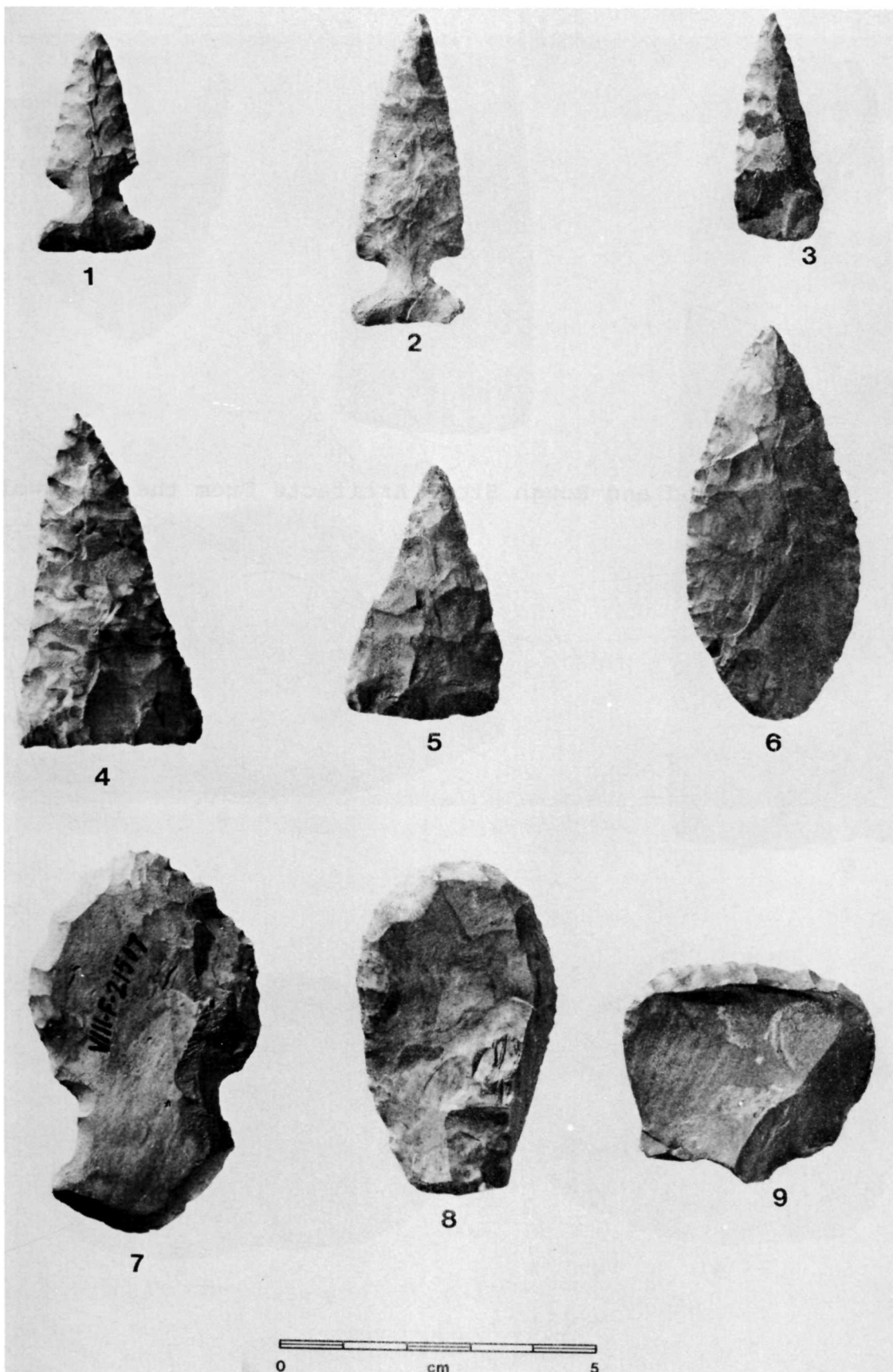
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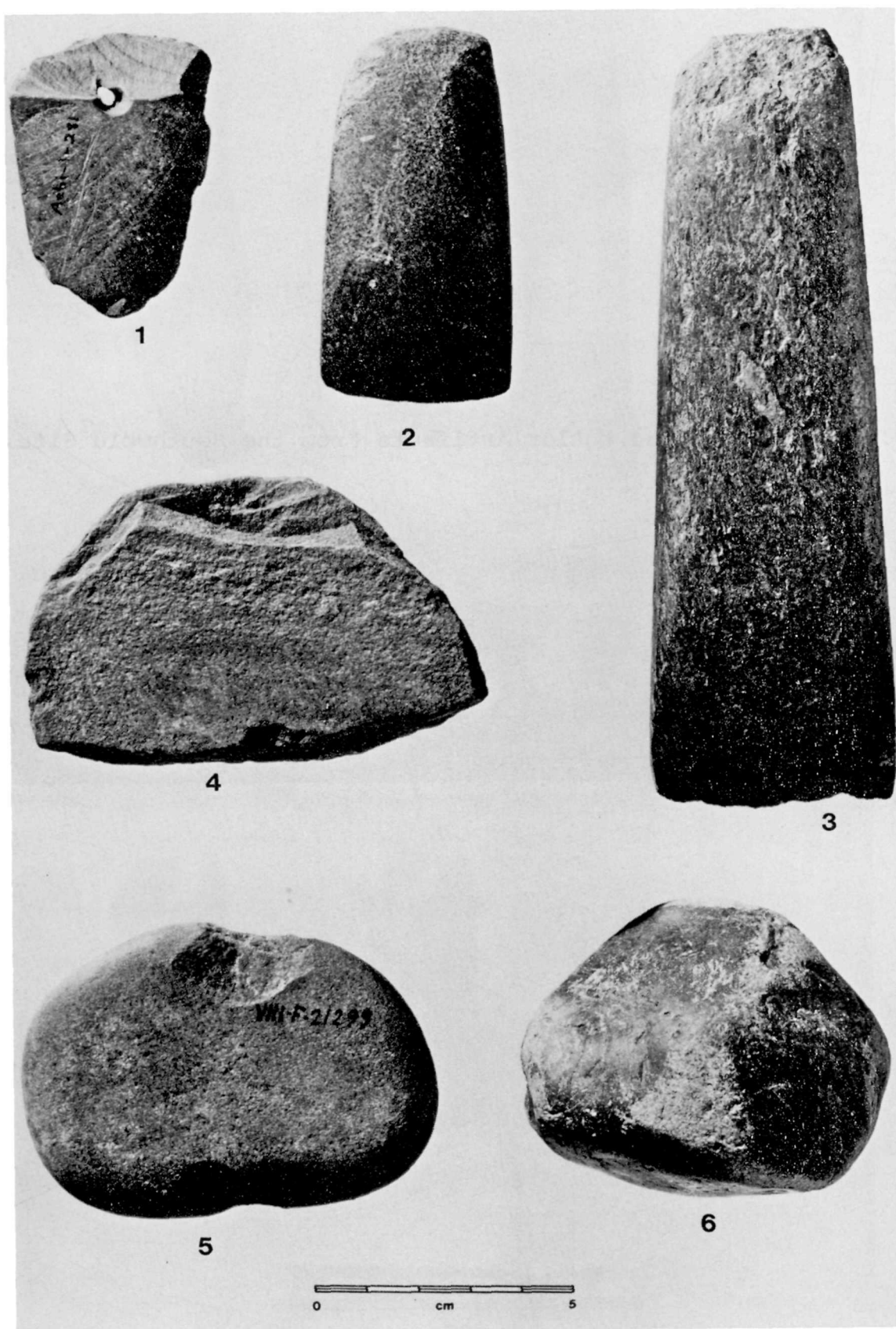
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13 Chipped Lithic Artifacts From the Southwold Site.



14 Ground and Rough Stone Artifacts From the Southwold Site.



15 Bone and Antler Artifacts From the Southwold Site.

