



1980

6-Settlement Pattern Survey in Allegan County, Michigan: 1979 Field Season

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Settlement Pattern Survey
in Allegan County, Michigan:
1979 Field Season

6

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Lansing, Michigan

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The survey staff for the 1979 field season was composed of Deborah Rhead and William Mangold, field supervisors; and James Wojtala and Judith Hauser, field assistants. Our sampling universe included large areas of relatively low boggy terrain. Field personnel coped valiantly with numerous predatory creatures, including the regional variant of our cover design. Despite these adverse field conditions, all are to be commended for achieving the desired percentage coverages of our quarter-section survey units.

We wish to thank personnel in the Statistical Laboratory at Western Michigan University, Dr. Gerald Sievers, Director, for extensive consultation regarding statistical analysis of the Settlement Pattern data set. In particular, the assistance of Dr. Janice Du Bien is gratefully acknowledged.

Elizabeth B. Garland, Ph.D.
Project Director

September, 1980

Abstract

The 1979 Settlement Pattern Survey (SPS 79) in Allegan County, Michigan observed and recorded a total of 74 prehistoric sites which revealed 10 identifiable components. The majority of sites were small lithic scatters which did not yield culturally diagnostic artifacts. In general the results of this field season conformed with expectations based upon soils, landform and drainage patterns in the survey universe. This report describes and evaluates the significance of the archaeological data recovered.

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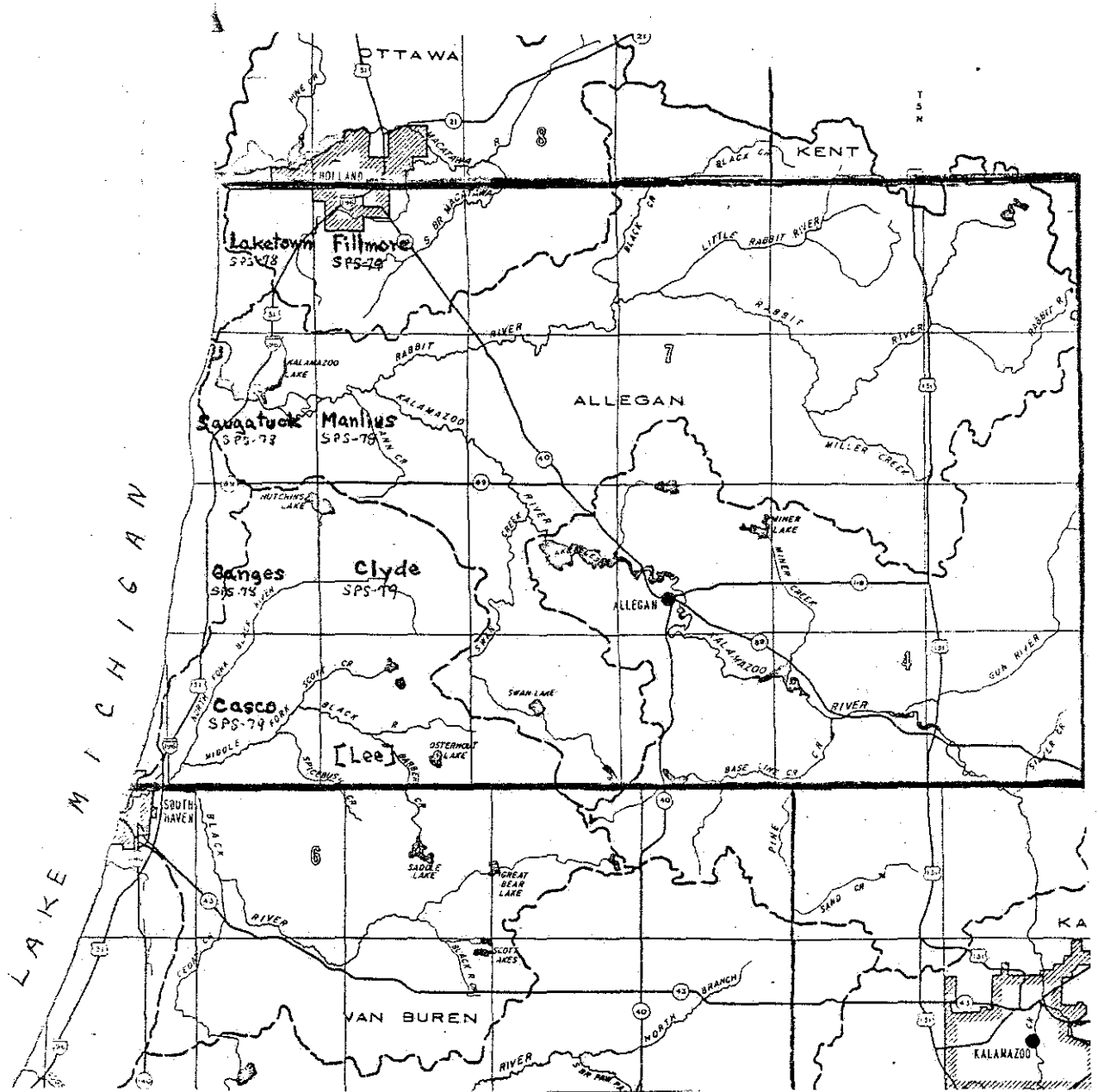
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Section 1. The Survey Project

This project marks the second season of field work on the Settlement Pattern Survey (SPS) in the Lower Kalamazoo River basin in Allegan County, Michigan. The 1978 report by Garland and Kingsley summarized previous research in the area and the environmental setting, and these need not be detailed again here. Previously known site locations for the 1979 survey area are discussed in Section 3.

In 1978 the survey completed a 20% random sample of quarter-sections in Laketown, Saugatuck, Manlius and Ganges Townships (Map A). In addition, six quarter-sections were surveyed in Fillmore Township. During the 1979 season we finished the Fillmore sample, and likewise completed a 20% survey of Clyde and Casco Townships. Time did not permit survey to get underway in Lee Township. Locations of the sampling units for both field seasons are shown on Map 1 in Section 5.

The 1979 survey universe included regions well off the main trench of the Kalamazoo, which were anticipated to provide a considerable contrast to the site densities recorded in 1978 along the Kalamazoo in Saugatuck and Manlius Townships. We also wished to ascertain the nature and density of site distribution along the Black River, which enters Lake Michigan at South Haven in Van Buren County, for comparison with prehistoric occupation along the major river to the north (Map A). While this latter objective was only partially met by survey in Casco Township only, rather than both Casco and Lee, some significant contrasts with the Kalamazoo settlement pattern were revealed.



Map A. SPS 78 and S. Universe; The Lower Kalamazoo and Black Rivers unty.

Section 2. Field Methods and Laboratory Techniques

The field procedures employed in the 1979 season were modified in certain respects, although continuity with 1978 methods was maintained in all essential aspects. As in 1978, surveyors walked at 25 pace intervals, and shovel probing was employed where surface visibility was less than 50%. During 1979, no sites were located by shovel probing which had not first been noted in surface examination. This contrasts with the 1978 results, when an estimated 5% of sites were discovered by shovel probing. Despite the inherent limitations of shovel probing, we feel that it does provide an added measure of confidence in our site location survey results, both positive and negative. It is just as important for us to know where sites are not located if the results of our sampling procedure are to have any real validity. In a site location survey in this area of Michigan we can not justify writing off a large proportion of our targeted sampling units as unsurveyable simply because the area is wooded, heavily grassed over, or otherwise has poor surface visibility.

Our sampling strategy of stratifying by township and surveying a 20% randomly drawn sample of quarter-sections was in accord with 1978 procedures. Coverage of targeted sampling units by stratum in 1978 ranged from 87% to 100% (Garland and Kingsley 1979:75). Coverage for completed strata in 1979 are summarized in Table 1.

<u>Township</u>	<u>No. of Units ($\frac{1}{4}$ sec.)</u>	<u>% Coverage</u>
Clyde	29	85%
Casco	32	86%
Fillmore	29	82%

Table 1

Fillmore Township was the most difficult to survey, and has the lowest percentage of coverage of the 7 townships covered in 1978 and 1979. Many property owners are absentee landlords, which makes permissions difficult to obtain. We sent out a mailing to land owners during the winter of 1979 (see Appendix), and included a stamped return postcard for a response. This did result in securing a large number of permissions to survey prior to the start of field work, thereby saving a considerable amount of time. Despite these efforts, there simply are a great many people in the area who, for whatever reason, refused to cooperate. We were very pleased when Fillmore Township was finally completed and we could move to the southern part of the county.

The field survey for the 1979 season was coordinated with the Western Michigan University field school directed by Dr. William Cremin. We were in the field from April 30 to June 20. Anticipating the problems in Fillmore, we worked the first week of the field season there with 4 staff personnel only. From week two until the end of the field season (6.5 weeks) we used two survey teams, each consisting of a field supervisor, a field assistant, and two students from the field school. All personnel commuted daily from the University to the field. This resulted in a lot of field time being used in transit to and from survey locations, and also had the disadvantage that our people remained "outsiders," never becoming well acquainted in the study area. Housing a crew in or near the survey area (as was done in 1978) is a preferable arrangement . . . collector contacts are more likely, morale is better, and quality of the actual survey work done is probably also better. Another important consideration is that a field crew housed

"on location" has more opportunity to re-collect sites. This was a significant factor in the high percentage of cultural-chronological placement of sites achieved by the 1978 survey and is one reason for the lesser degree of success in this regard in 1979.

The 1980 survey was again housed off campus, near the survey area, with attendant greater success in these aforementioned ways. It might be noted that the cost of car rental now is such that if a project is budgeted for a large amount of travel, it is often possible to pay for house rental out of the transportation part of the budget, actually spend fewer dollars, and also conserve fuel.

There was one addition to field recording procedures which was begun in 1979, and that is a Unit (quarter-section) form was filled out by the field supervisor in addition to the Site Survey Form. The latter was modified in only minor ways from the 1978 form. Copies of both forms are included in the Appendix. The Unit form was added in order to strengthen the data set for statistical analysis, as will be discussed further in Section 6.

Laboratory procedures included washing and labelling all lithic tools, sherds, and debitage. SPS numbers assigned in the field were placed on the artifacts, and all materials replaced in the original bags. The State site number issued by the Michigan History Division was subsequently recorded on all survey forms and artifact bags. Artifact bags are stored in large boxes in SPS numerical sequence.

Section 3-A. Summary of Site Distributions

The 1979 Settlement Pattern Survey focussed on 3 townships in Western Allegan County where very little previous research had

been done. Except for 6 quarter-sections surveyed in Fillmore by SPS 78, the only systematic survey of any kind had been in the southeast corner of Fillmore Township; section 36 of Fillmore was included in the 1977 Kalamazoo Basin Survey (Cremin et al. 1978). Section 36 is the reported location of the several groups of earthworks (20 AE 16, 228, 229, 230) but field confirmation of the present day existence of these earthworks was not forthcoming from Cremin's survey, nor from other efforts to relocate them (pers. comm., Larry Dorothy). The Holland Indian Village (20 AE 240) and two other unidentified camp sites (20 AE 8, 14) were not included among our surveyed units.

Two sites previously reported in Clyde Township were in units surveyed by us. The Frazer Site (SPS 79 58, 20 AE 84) was revisited, but our survey failed to confirm the existence of an informant site in Section 4 (20 AE 357), which was reported by Cremin and Marek (1978).

In Casco Township several previously reported sites were included or possibly included in our survey and one of these was confirmed, the Dailey Village site (20 AE 45). However the historic camp in Section 11 (20 AE 236) was not confirmed, nor was a site referable to the Nelson collection (20 AE 6, 7) identified in Section 19.

Sites recorded (visited) by township are summarized in Table 2.

<u>Township</u>	<u>No. of Sites In Sampling Units</u>	<u>No. of Sites Visited Outside of Sampling Units</u>
Clyde	6	7
Casco	31	2
Fillmore	<u>28*</u>	<u>4</u>
	65 total	13 total

*Includes 6 prehistoric sites recorded by SPS 78.

Table 2

Section 3-B. National Register Eligibility of Sites

Assessment of National Register of status of these sites suffers from the defect that there is rarely sufficient data for nomination based on site survey in areas like the Kalamazoo Basin. This matter was discussed in some detail in the 1978 report (Garland and Kingsley 1979: 77 ff).

It will be noted in the site descriptions that most of these 1979 sites have a low priority rating in terms of their presumed ability to yield significant information about the prehistoric cultures of the area. These sites will be assessed as not eligible (No); those sites with medium to high priority will be assessed as having insufficient data (I.D.) for nomination. No sites in the 1979 data set are deemed eligible for NR nomination at this time. Several sites might be eligible if test excavation is done in the future, and it is hoped that this can be accomplished during summer, 1981. National Register eligibility status will be found directly below the State number in the site descriptions which follow.

Section 3-C.SITE DESCRIPTIONS

The following are brief descriptions of the sites located in the course of the 1979 survey. The format is: site numbers, site name, site type (isolated find, sparse scatter, scatter, heavy scatter), provenience, cultural affiliation, comments, and priority status (low, medium, high) for future excavation.

Priority status is determined not simply by size or yield of site, but by the presumed ability of sites to yield information regarding prehistoric systems of settlement, cultural chronology and history, and social organization and patterning.

1. SITES WITHIN THE SAMPLING UNITS. New and previously known prehistoric sites are included; previously known sites are indicated.

- SPS 79 1 Dykhuis. Sparse scatter; SE 1/4 of SW 1/4 of NW 1/4, Fillmore Sec. 2; undetermined. Sparse scatter of lithic debitage and a mano. Owner (Mrs. Henrietta Dykhuis reports finding bifaces which have since been lost).
20 AE 643 Low priority.
*No
- SPS 79 2 Schaap 2. Sparse scatter; NW 1/4 of NW 1/4 of SE 1/4, Fillmore Sec. 11; undetermined. Sparse lithic scatter, two manos and one nutting stone on sand and gravel ridge overlooking low wet field. Low priority.
20 AE 644
No
- SPS 79-3 A. Bosch. Sparse scatter; NE 1/4 of NW 1/4 of NE 1/4, Fillmore Sec. 1; undetermined. Sparse lithic scatter, mano and possible netsinker on gravel ridge. Low priority.
20 AE 645
No
- SPS 79 4 Van Netten. Sparse scatter; NW 1/4 of NE 1/4 of NE 1/4, Fillmore Sec. 1; Archaic. Sparse scatter of lithic debitage, one mano and one biface on gravel ridge -- probably relates to SPS 79 3. Medium priority.
20 AE 646
No
- SPS 79 5 H. Lake. Isolated finds; NE 1/4 of SW 1/4 of SW 1/4, Fillmore Sec. 2; undetermined. Lithic debitage in low, flat, muck field near creek. Low priority.
20 AE 647
No
- SPS 79 6 Oetman. Sparse scatter; SE 1/4 of SE 1/4 of NE 1/4, Fillmore Sec. 31; undetermined. Sparse scatter of lithic debitage. Probably relates to SPS 78 126-131; SPS 79 7, 9, 18 and 19. Probable Archaic scatters along the same ridge. Low priority.
20 AE 648
No
- SPS 79 7 Koops. Isolated find; NW 1/4 of NW 1/4 of NE 1/4, Fillmore Sec. 31; undetermined. Isolated biface in drained swamp. Probably relates to SPS 78 126-131; SPS 79 6, 9, 18 and 19. Probable Archaic scatters along the same ridge. Low priority.
20 AE 649
No

*National Register eligibility assessment; see Section 3-B.

- SPS 79 8
20 AE 650
No
Prins. Isolated find; NE 1/4 of SE 1/4 of NW 1/4, Fillmore Sec. 18; undetermined. Isolated mano on ridge overlooking low swampy area. Low priority.
- SPS 79 9
20 AE 651
I.D.
Hulst. Scatter; NE 1/4 of SE 1/4 of SE 1/4, Fillmore Sec. 30; undetermined. Moderate size scatter of lithics on ridge near swamp. A few tools and biface present, probably relates to SPS 78 126-131; SPS 79 6, 7, 18 and 19 scatters along the same ridge, probably Archaic. Medium to high priority.
- SPS 79 10
20 AE 652
No
Zoet 1. Sparse scatter; NE 1/4 of NE 1/4 of SW 1/4 of Fillmore Sec. 24; L. Archaic. Sparse scatter over 5 acres of lithics, a mano and Feeheley-like biface on slope of ridge. Probably relates to SPS 11-14 which run along same ridge and 4th rank stream. Low to medium priority.
- SPS 79 11
20 AE 653
No
Zoet 2. Sparse scatter; NW 1/4 of SE 1/4 of SW 1/4, Fillmore Sec. 24; undetermined. Sparse lithic debitage scatter on ridge probably related to SPS 79 10, 12-14 scatters which run along same ridge and 4th rank stream. Low priority.
- SPS 79 12
20 AE 654
No
Lohman. Sparse scatter; SE 1/4 of NW 1/4 of SW 1/4, Fillmore Sec. 24; Archaic(?) Light scatter of lithic debitage, and one biface fragment. Probably relates to SPS 79 10, 11, 13 and 14 which follow the same ridge. Low priority.
- SPS 79 13
20 AE 655
No
Ryzenga. Sparse scatter; NW 1/4 of NW 1/4 of NE 1/4, Fillmore Sec. 25; undetermined. Sparse debitage scatter and mano on ridge near stream. Probably related to SPS 79 10-12, and 14 -- scatters which run along same ridge and 4th rank stream. Low priority.
- SPS 79 14
20 AE 656
No
Koops 2. Sparse scatter; NW 1/4 of SE 1/4 of NE 1/4, Fillmore Sec. 25; undetermined. Chippage and biface in scatter along slope of ridge. Probably relates to SPS 79 10-13 scatters which run along same ridge and 4th rank stream. Low priority.
- SPS 79 15
20 AE 657
No
Gritter. Sparse scatter; NW 1/4 of SE 1/4 of NW 1/4, Fillmore Sec. 7; undetermined. Light scatter of lithic debitage and mano on ridge overlooking stream. Low priority.
- SPS 79 16
20 AE 658
No
Defrell. Sparse scatter; NW 1/4 of NE 1/4 of SW 1/4, Fillmore Sec. 18; undetermined. Light scatter of F.C.R. and chippage and a mano on sand ridge above stream. Low priority.
- SPS 79 17
20 AE 659
No
Guering. Sparse scatter; NE 1/4 of NW 1/4 of SE 1/4, Fillmore Sec. 18; undetermined. Light scatter of chippage in sandy area near creek. Badly disturbed by dumping and wind erosion. Low priority.

- SPS 79 18
20 AE 660
I.D. Dykhuis 2. Sparse scatter; SW 1/4 of NE 1/4 of SE 1/4 Fillmore Sec. 29; undetermined. Light scatter of lithic debitage and a mano on gravel ridge. Site may relate to SPS 78 126-131 and SPS 79 6, 7, 9, and 19; probable Archaic scatters along the same ridge. Medium priority.
- SPS 79 19
20 AE 661
No Brink 2. Isolated find; NE 1/4 of NW 1/4 of SE 1/4, Fillmore Sec. 31; undetermined. One flake and a mano on sand-gravel ridge. Probably relates to SPS 78 126-131; SPS 79 6, 7, and 18; probable Archaic scatters along the same ridge. Low priority.
- SPS 79 20
20 AE 662
No Kavanaugh 1. Sparse scatter; SE 1/4 of NE 1/4 of NW 1/4 Casco Sec. 5; undetermined. Light scatter of lithic debitage on sand ridge partially destroyed by I-196. Low priority.
- SPS 79 21
20 AE 663
No Kavanaugh 2. Sparse scatter; SE 1/4 of NW 1/4 of NW 1/4 Casco Sec. 5; undetermined. Sparse scatter of lithic debitage on sand ridge. Low priority.
- SPS 79 22
20 AE 664
No Kavanaugh 3. Sparse scatter SE 1/4 of NW 1/4 of NW 1/4 Casco Sec. 5; undetermined. Light chippage scatter and a mano on sand ridge. Low priority.
- SPS 79 23
20 AE 665
No Stanisz. Sparse scatter; SE 1/4 of SW 1/4 of NW 1/4, Casco Sec. 5; undetermined. Light scatter of chippage and a mano on a sand ridge. Low priority.
- SPS 79 24
20 AE 666
I.D. Stevens. Sparse scatter; NE 1/4 of NW 1/4 of SW 1/4, Casco Sec. 12; undetermined. Light scatter of F.C.R. and chippage on a sandy slope adjacent to low wet area. May relate to Dailey Village site 20 AE 45. (SPS 79 8). Medium priority.
- SPS 79 25
20 AE 667
No Catt. Sparse scatter; SE 1/4 of SW 1/4 of NW 1/4, Casco Sec. 7; undetermined. Light scatter of chippage, F.C.R. and a mano on sand ridges near spring. Medium to low priority.
- SPS 79 26
20 AE 668
No Hamlin 1. Sparse scatter; NE 1/4 of NE 1/4 of SW 1/4, Casco Sec. 4; undetermined. Light debitage scatter in flat field above stream. Probably relates to SPS 79 27, 28 and 29. Low priority.
- SPS 79 27
20 AE 669
No Hamlin 4. Sparse scatter; SE 1/4 of SE 1/4 of SW 1/4, Casco Sec. 4; undetermined. Light debitage scatter in flat field above stream. Probably relates to SPS 79 26, 28 and 29. Low priority.
- SPS 79 28
20 AE 670
No Prine. Sparse scatter; SE 1/4 of SW 1/4 of SW 1/4, Casco Sec. 4; undetermined. Light debitage scatter in flat dry field above stream. Probably relates to SPS 79 26, 27 and 29. Low priority.

- SPS 79 29 Compton. Sparse scatter; SE 1/4 of NW 1/4 of SW 1/4, Casco
20 AE 671 Sec. 4; undetermined. Light debitage scatter and biface
No in flat dry field above stream. Probably relates to
 SPS 79 26-28. Low Priority.
- SPS 79 30 Latchow. Sparse scatter; NE 1/4 of NE 1/4 of Casco Sec. 11;
20 AE 672 undetermined. Light scatter of F.C.R., debitage, a
No biface and a mano over 10 acres along ridge near stream
 and drained swamp. Medium to low priority.
- SPS 79 31 Folkert. Sparse scatter; SE 1/4 of NW 1/4 of SW 1/4,
20 AE 673 Fillmore Sec. 35; undetermined. Light debitage scatter
No in high clay field between ravines. Low priority.
- SPS 79 32 Harger. Sparse scatter; SE 1/4 of NW 1/4 of SE 1/4, Casco
20 AE 674 Sec. 14; undetermined. Light debitage scattered in
No low field. Low priority.
- SPS 79 33 Barden Orchard. Isolated find; NE 1/4 of NE 1/4 of NE 1/4
20 AE 675 of Casco Sec. 18; undetermined. Three chips and one
No core on sandy trail. Low priority.
- SPS 79 34 Scott. Isolated find; SE 1/4 of SW 1/4 of NE 1/4 of Casco
20 AE 676 Sec. 18; Late Archaic. One chip and one biface in
No sandy field near stream. Low priority.
- SPS 79 35 Spencer. Sparse scatter; NW 1/4 of SE 1/4 of SE 1/4, Casco
20 AE 677 Sec. 22; Archaic. Light F.C.R. and chippage scatter
I.D. over about 1 acre east of ridge at the edge of swamp.
 Classification on the basis of Don Spencer's collection.
 Probably relates to SPS 79 36. Medium priority.
- SPS 79 36 Spencer 2. Sparse scatter; SW 1/4 of NW 1/4 of SE 1/4 Casco
20 AE 678 Sec. 22; Archaic. Small debitage and light F.C.R.
I.D. scatter and 5 cores on ridge west of swamp probably
 relates to SPS 79 35. Classification on the basis of
 Don Spencer's collection. Medium priority.
- SPS 79 37 Lockhart. Isolated find; NE 1/4 of NE 1/4 of SE 1/4, Casco
20 AE 679 Sec. 18; undetermined. Two chips in sandy field west
No of swamp. Low priority.
- SPS 79 38 Fowler. Isolated find; NE 1/4 of SW 1/4 of SE 1/4, Casco
20 AE 680 Sec. 18; undetermined. Two chips in sandy field west
No of swamp. Low priority.
- SPS 79 39 Thompson. Sparse scatter; SW 1/4 of NE 1/4 of SW 1/4,
20 AE 681 Casco Sec. 17; undetermined. Light scatter of F.C.R.
No and lithic debitage in sandy field on Black River bluff.
 Low priority.
- SPS 79 40 Rabbers. Isolated find; NW 1/4 of SE 1/4 of SE 1/4, Fill-
20 AE 682 more Sec. 3; undetermined. Three chips in sandy field
No near creek. (Owner James Rabbers kept them.) Low priority.

- SPS 79 41
20 AE 683
No
Fleming. Sparse scatter; NE 1/4 of NE 1/4 of SW 1/4, Casco Sec. 9; undetermined. One core and light scatter of lithic debitage in high sandy field near stream. Low priority.
- SPS 79 42
20 AE 684
No
Fleming 2. Sparse scatter; NW 1/4 of NE 1/4 of SW 1/4, Casco Sec. 9; undetermined. Light scatter of lithic debitage in high sandy field near stream. Low priority.
- SPS 79 43
20 AE 685
No
Fleming 3. Sparse scatter; NW 1/4 of SE 1/4 of SW 1/4 of SW 1/4 of Casco Sec. 9; undetermined. Light debitage scatter in sandy field near stream. Low priority.
- SPS 79 44
20 AE 686
I.D.
Schlack. Scatter; NW 1/4 of SE 1/4 of SE 1/4, Casco Sec. 6; undetermined. Moderate debitage scatter on sandy ridge above low wet field. Low to medium priority.
- SPS 79 45
20 AE 687
No
Ridley. Sparse scatter; SE 1/4 of NW 1/4 of SW 1/4, Casco Sec. 10; Late Archaic. Light lithic debitage scatter, one side notched biface tip fragment on sand ridge above low field. Low priority.
- SPS 79 46
20 AE 688
No
Stevens. Sparse scatter; NE 1/4 of NE 1/4 of SW 1/4, Casco Sec. 10; undetermined. Light chippage scatter in low area north of ridge. Low priority.
- SPS 79 47
20 AE 689
No
Hadaway. Sparse scatter; NE 1/4 of NE 1/4 of NE 1/4, Casco Sec. 8; undetermined. Light lithic debitage and F.C.R. scatter on top of high sand ridge. Low priority.
- SPS 79 48
20 AE 690
I.D.
Yerek. Sparse scatter; NE 1/4 of SE 1/4 of SW 1/4 of NW 1/4, Casco Sec. 24; ?Paleo; Early Archaic. Light scatter of lithic debitage, and biface fragment on slight sand ridge blow-out. Medium priority. Early Archaic classification on basis of bifurcate stemmed points in Robert Decker's collection; Paleo point reported but not seen.
- SPS 79 49
20 AE 691
I.D.
Andrey. Sparse scatter; NW 1/4 of NW 1/4 of NW 1/4, Casco sec. 24; undetermined. Light lithic debitage and F.C.R. scatter on ridge above stream. May relate to SPS 79 52. Low priority.
- SPS 79 50
20 AE 692
I.D.
Overhiser 1. Sparse scatter; NE 1/4 of NW 1/4 of NW 1/4, Casco Sec. 14; undetermined. Two cores, and light lithic debitage and F.C.R. scattered on top of high ridge. Probably relates to SPS 79 51. Low to medium priority.
- SPS 79 51
20 AE 693
I.D.
Overhiser 2. Sparse scatter; SE 1/4 of SE 1/4 of NW 1/4, Casco Sec. 14; undetermined. Uniface and light scatter of lithic debitage on slight sand ridge. Probably relates to SPS 79 50. Low to medium priority.
- SPS 79 52
20 AE 694
No
Narikou. Sparse scatter; NE 1/4 of NE 1/4 of NE 1/4, Casco Sec. 23; undetermined. Light lithic debitage scatter on sandy bluff along Black River. Low priority.

- SPS 79 53 Meshkin. Sparse scatter; SE 1/4 of NE 1/4 of NW 1/4,
20 AE 695 Clyde Sec. 2; Late Woodland. Triangular biface and
I.D. light scatter of lithic debitage on sandy ridge.
 Low to medium priority.
- SPS 79 54 Brink 3. Scatter; SW 1/4 of NE 1/4 of NE 1/4, Clyde Sec. 5;
20 AE 696 undetermined. Two uniface and moderate scatter of
I.D. lithic debitage and F.C.R. along sand ridge. Medium
 priority.
- SPS 79 55 Brink 4. Scatter; NE 1/4 of SE 1/4 of NE 1/4, Clyde
20 AE 697 Sec. 5; undetermined. Moderate scatter of lithic
No debitage and F.C.R. along sand ridge north of low
 field. Low priority.
- SPS 79 56 Hearn. Sparse scatter; NE 1/4 of NW 1/4 of NW 1/4, Clyde
20 AE 698 Sec. 27; undetermined. Light lithic debitage scatter
No on disturbed sand ridge on the edge of swamp. Low
 priority.
- SPS 79 57 Hollander. Sparse scatter; SE 1/4 of SW 1/4 of SW 1/4,
20 AE 699 Clyde Sec. 16; undetermined. Light lithic debitage
No scatter on rise west of swamp. Low priority.
- SPS 79 58 Frazer. Scatter; SW 1/4 of NE 1/4, Clyde Sec. 19;
* 20 AE 84 Late Woodland. Moderate scatter of chippage, two bifaces,
*(previously uniface, 2 c/m sherds. Also visited in 1978 (SPSO 78 17).
recorded) High priority.
I.D.
- SPS 79 59 Slikkers. Scatter; SE 1/4 of NW 1/4 of SE 1/4, Fillmore
20 AE 700 Sec. 3; undetermined. Two bifaces, one core and moderate
I.D. scatter of lithic debitage and F.C.R. over about five
 acres above river terrace. Medium to low priority.

SITES OUTSIDE THE SAMPLING UNITS

- SPSO 79 1 Schaap 1. Sparse scatter; NE 1/4 of NW 1/4 of NE 1/4, Fillmore Sec. 2; undetermined. Light lithic debitage, one core, one blank fragment, and one quartz biface tip on sand and gravel ridge. Owner Jay Schaap may collect and does not welcome further investigation. Medium to low priority.
20 AE 701
I.D.
- SPSO 79 2 Ellis. Sparse scatter; SW 1/4 of SE 1/4, Fillmore, Sec. 17; undetermined. Feature: pit with charcoal and oxidized zone in road cut. Chips and F.C.R. on surface. High priority.
20 AE 702
I.D.
- SPSO 79 3 Vandebelt. Sparse scatter; NE 1/4 of SE 1/4 of NE 1/4 of NW 1/4, Fillmore Sec. 13; undetermined. Two cores, light scatter of lithic debitage and F.C.R.; one mano in high sandy field. Medium to low priority.
20 AE 703
I.D.
- SPSO 79 4 Vandebelt 2. Isolated find; NE 1/4 of SE 1/4 of SE 1/4 of NW 1/4, Fillmore Sec. 13; undetermined. Four pieces of lithic debitage and light F.C.R. scatter in disturbed area of high sand field. Low priority.
20 AE 704
No
- SPSO 79 5 F.B. Scatter; SE 1/4 of SE 1/4 of NE 1/4, Lee Sec. 36; undetermined. Moderate lithic scatter in sand blow-out above creek. Very badly disturbed by off-road vehicles. Medium priority. (No map)
20 AE 705
No
- SPSO 79 6 Thompson 2. Scatter; SE 1/4 of SE 1/4 of NW 1/4, Casco Sec. 27; undetermined. Moderate scatter of lithic debitage and light F.C.R. scatter in mined sand blow-outs along ravine edge. Low to medium priority.
20 AE 706
No
- SPSO 79 7 State land. Scatter; SW 1/4 of NW 1/4 of NW 1/4; Valley Sec. 4; undetermined. Moderate scatter of lithic debitage and F.C.R. on sand ridge near drive access along bayou edge. Medium to high priority. (No map)
20 AE 707
I.D.
- SPSO 79 8 Dailey Village Site. Scatter; NW 1/4 of SE 1/4 of SE 1/4, Casco Sec. 12; L. Archaic. Moderate lithic scatter over about three acres; side notched biface fragment; light F.C.R. with several F.C.R. concentrations. Very disturbed by dump and sand mine activities. Medium to high priority.
*20 AE 45
*(previously recorded)
I.D.
- SPSO 79 9 Moore. Sparse scatter; SW 1/4 of SE 1/4, Clyde Sec. 21; undetermined. Two bifaces and light lithic and F.C.R. scatter on sand knoll. Medium to low priority.
20 AE 708
No
- SPSO 79 10 State land 2. Scatter; NE 1/4 of SW 1/4 of SW 1/4, Clyde Sec. 20; undetermined. Light F.C.R. moderate to heavy lithic scatter including one core on sand ridge over-looking low drained field. Medium priority.
20 AE 709
I.D.

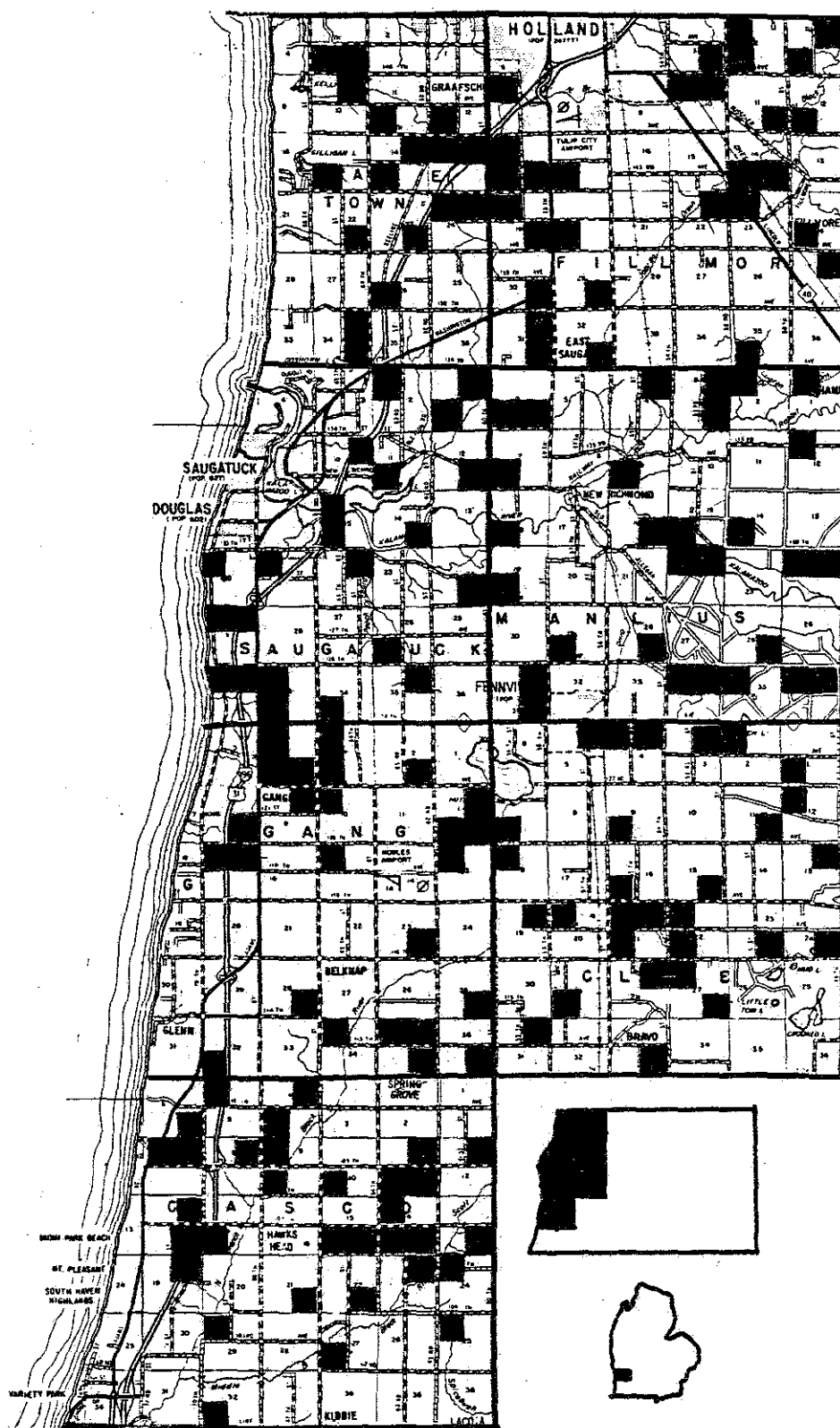
- SPSO 79 11 Collins. Scatter; SE 1/4 of SW 1/4 of NE 1/4, Clyde Sec. 7; undetermined. One biface. light F.C.R. scatter and moderate lithic scatter in sand blow-out north of swamp and just south of Hutchins Lake. Probably associated with SPSO 79 12. Low to medium priority.
20 AE 710
I.D.
- SPSO 79 12 Collins 2. Scatter; SW 1/4 of SE 1/4 of NE 1/4, Clyde Sec. 7; undetermined. Moderate lithic scatter and light F.C.R. scatter over large area along sand ridge north of swamp south of Hutchins Lake. Probably relates to SPSO 79 11. Medium priority.
20 AE 711
I.D.
- SPSO 79 13 Hobbs. Scatter; SW 1/4 of SE 1/4 of SE 1/4, Clyde Sec. 3; Woodland. Moderate lithic debitage and F.C.R. scatter in sand blow-out along sand ridge near upland swamp. Medium priority.
20 AE 712
I.D.
- SPSO 79 14 Emerick. Sparse scatter; SE 1/4 of NW 1/4 of NW 1/4, Clyde Sec. 16; undetermined. Light lithic and F.C.R. scatter on sand ridge north of house (owners reported finding bifaces but have lost them--no shovel probing or excavation allowed). Low to medium priority.
20 AE 713
No
- SPSO 79 15 Ely Beach. Scatter; NE 1/4 of SW 1/4 of NE 1/4, Clyde Sec. 26; undetermined. Moderate lithic scatter and F.C.R. on highly used state campsite beach. Medium priority.
20 AE 714
I.D.

Section 4. CATALOG OF CULTURAL MATERIAL - 1979

- SPS-79-1 - Debitage: 1; cores: 2; mano : 1.
SPS-79-2 - Debitage: 4; nutting stone: 1; mano : 2.
SPS-79-3 - Debitage: 2; mano: 2.
SPS-79-4 - Debitage: 9; biface: 1.
SPS-79-5 - Debitage: 4.
SPS-79-6 - Debitage: 11; utilized flakes: 1.
SPS-79-7 - Biface: 1.
SPS-79-8 - Mano : 1.
SPS-79-9 - Debitage: 246; wedge: 1; uniface: 1; biface: 2.
SPS-79-10 - Debitage: 3; biface: 1; mano : 2.
SPS-79-11 - Debitage: 7.
SPS-79-12 - Debitage: 3; biface: 1.
SPS-79-13 - Debitage: 3; mano : 3.
SPS-79-14 - Debitage: 2; biface: 1.
SPS-79-15 - Debitage: 1; mano : 2.
SPS-79-16 - Debitage: 4; mano : 4.
SPS-79-17 - Debitage: 4.
SPS-79-18 - Debitage: 1; uniface: 1; mano : 1.
SPS-79-19 - Debitage: 1; mano : 1.
SPS-79-20 - Debitage: 20; mano : 1.
SPS-79-21 - Debitage: 3.
SPS-79-22 - Debitage: 1; mano : 1; nutting stone: 1.
SPS-79-23 - Debitage: 4.
SPS-79-24 - Debitage: 27.
SPS-79-25 - Debitage: 4.

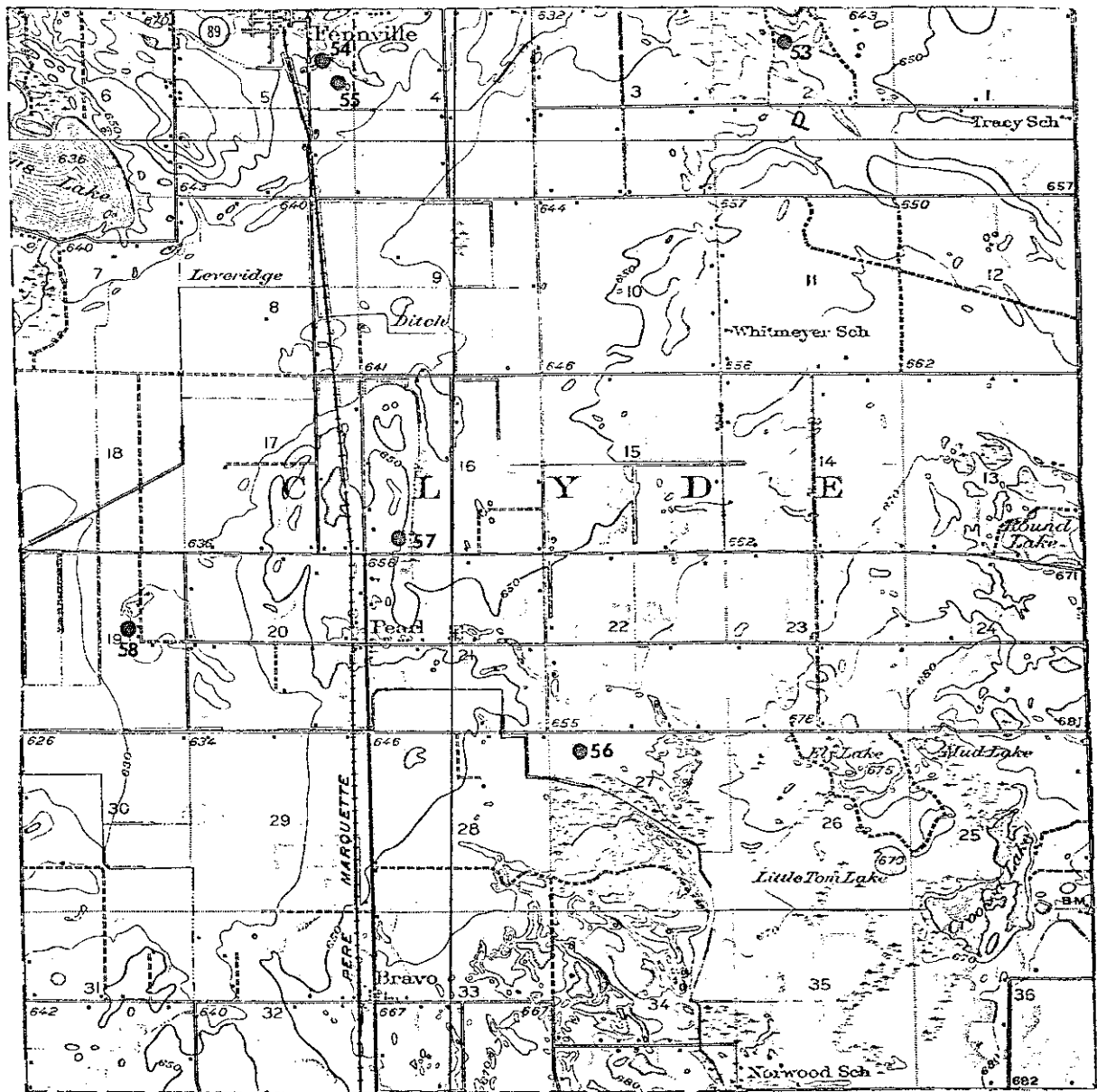
SPS-79-26 - Debitage: 4; biface: 1 (fragment); mano: 1.
SPS-79-27 - Debitage: 6.
SPS-79-28 - Debitage: 3.
SPS-79-29 - Biface: 1; uniface: 1.
SPS-79-30 - Debitage: 6; core: 1; uniface: 1.
SPS-79-31 - Debitage: 15; mano: 2.
SPS-79-32 - Debitage: 5.
SPS-79-33 - Debitage: 1; cores: 1.
SPS-79-34 - Debitage: 1; biface: 1.
SPS-79-35 - Debitage: 16.
SPS-79-36 - Debitage: 7; cores: 5.
SPS-79-37 - Debitage: 3.
SPS-79-38 - Debitage: 2.
SPS-79-39 - Debitage: 6.
SPS-79-40 - Debitage: 3.
SPS-79-41 - Debitage: 2; cores: 1.
SPS-79-42 - Debitage: 5.
SPS-79-43 - Debitage: 4.
SPS-79-44 - Debitage: 27; china: 1.
SPS-79-45 - Debitage: 1; bifaces: 2.
SPS-79-46 - Debitage: 8.
SPS-79-47 - Debitage: 5.
SPS-79-48 - Debitage: 14; uniface: 1; biface: 1.
SPS-79-49 - Debitage: 4.
SPS-79-50 - Debitage: 9; cores: 2; mano: 1.
SPS-79-51 - Debitage: 2; uniface: 1.
SPS-79-52 - Debitage: 11.
SPS-79-53 - Debitage: 8; bifaces: 1.

- SPS-79-54 - Debitage: 30; cores: 1; unifaces: 2; Kaolin pipe: 1
(fragment).
- SPS-79-55 - Debitage: 28.
- SPS-79-56 - Debitage: 7.
- SPS-79-57 - Debitage: 10; mano: 2.
- SPS-79-58 - Debitage: 133; cores: 2; bifaces: 2; unifaces: 2;
body sherds: 6 (cm/grit); china: 3; bottle: 1. + kaolin pipe
fragment.
- SPS-79-59 - Debitage: 6.
- SPS0-79-1 - Debitage: 8; cores: 1; bifaces: 1; nutting stone: 1.
- SPS0-79-2 - Mano : 1.
- SPS0-79-3 - Debitage: 4; cores: 2; mano: 1.
- SPS0-79-4 - Debitage: 3; wedges: 1.
- SPS0-79-5 - Debitage: 42.
- SPS0-79-6 - Debitage: 30.
- SPS0-79-8 - Debitage: 56; cores: 1; unifaces: 1; bifaces: 1.
- SPS0-79-9 - Debitage: 17; bifaces: 2; china: 1; bottles: 2 (fragments);
buttons: 2.
- SPS0-79-9 - Debitage: 21; bone: 1 (fragment).
- SPS0-79-10- Debitage: 7.
- SPS0-79-10- Debitage: 86; cores: 1.
- SPS0-79-11- Debitage: 92; bifaces: 1.
- SPS0-79-11- Debitage: 22; mano : 1.
- SPS0-79-12- Debitage: 38.
- SPS0-79-13- Debitage: 40; body sherds: 2 (cm/grit).
- SPS0-79-14- Debitage: 6; china: 1 (fragment).
- SPS0-79-15- Debitage: 82; cores: 1.

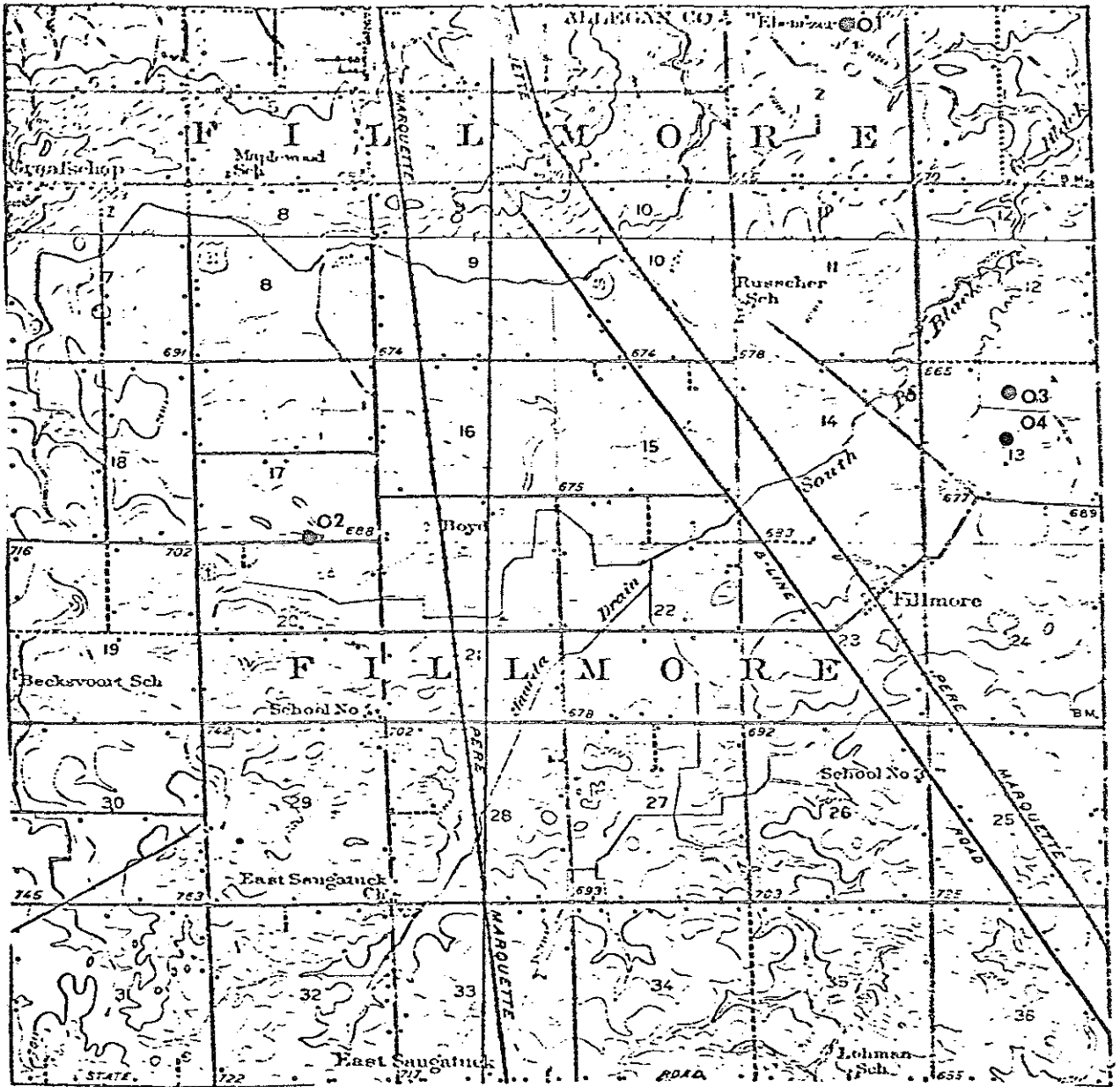


MAP 1

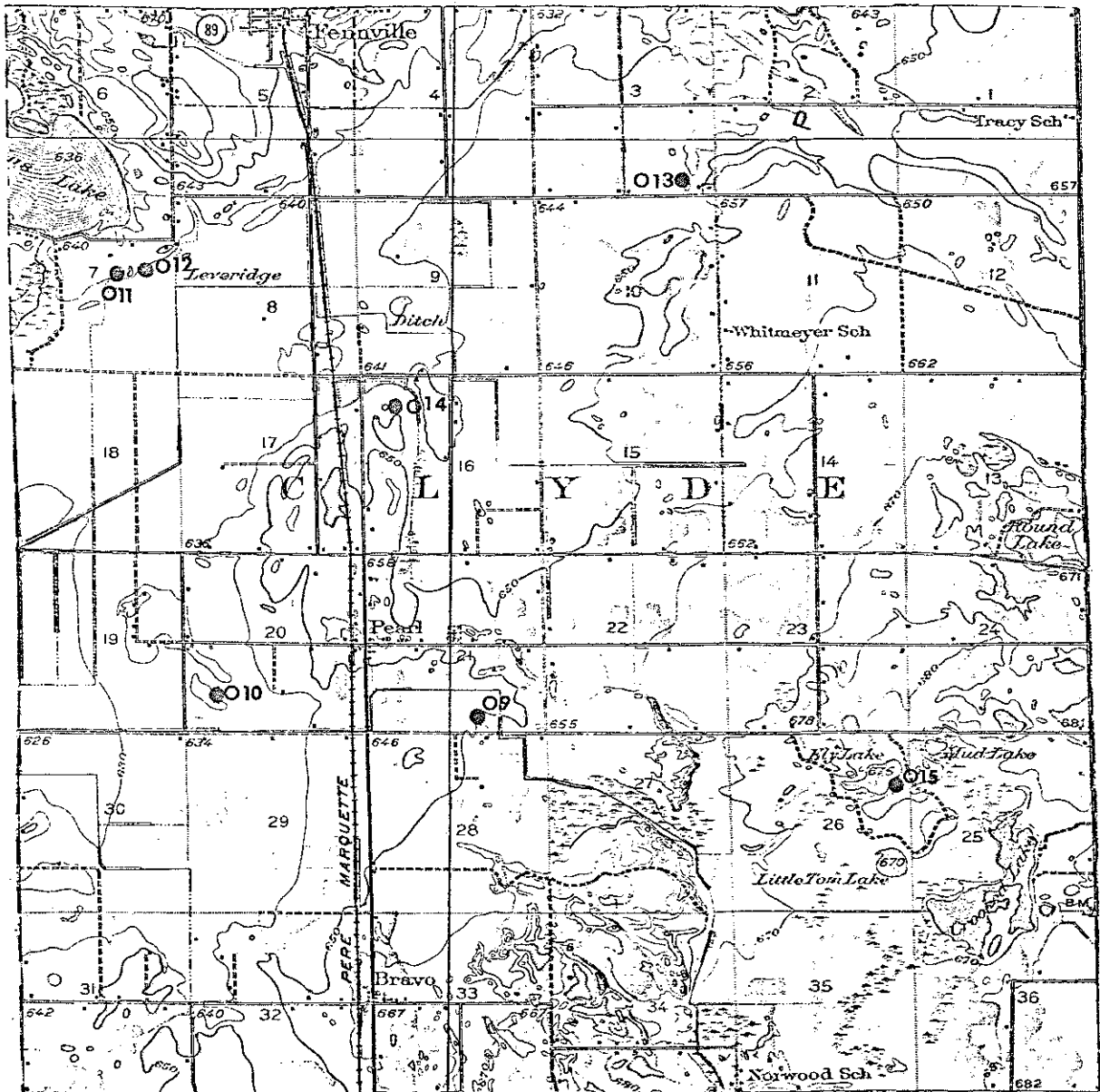
LOCATIONS OF
1978 AND 1999 SAMPLING UNITS,
ALLEGAN COUNTY, MICHIGAN



Map 4. Clyde Township; sites within sample units identified by SPS-79 numbers.



Map 5. Fillmore Township; sites outside sample units ("0" indicates site visited/recorded by 1979 survey).



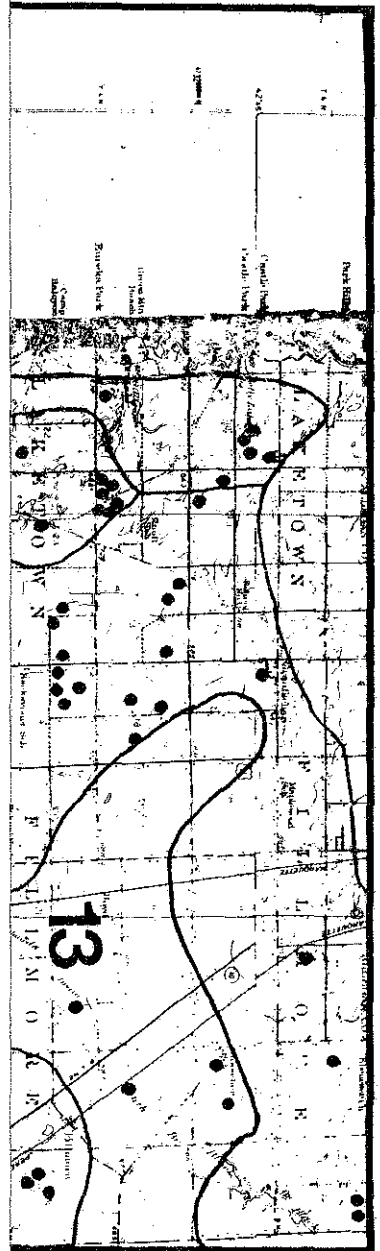
Map 7. Clyde Township; sites outside sample units ("0" indicates site visited/recorded by 1979 survey).

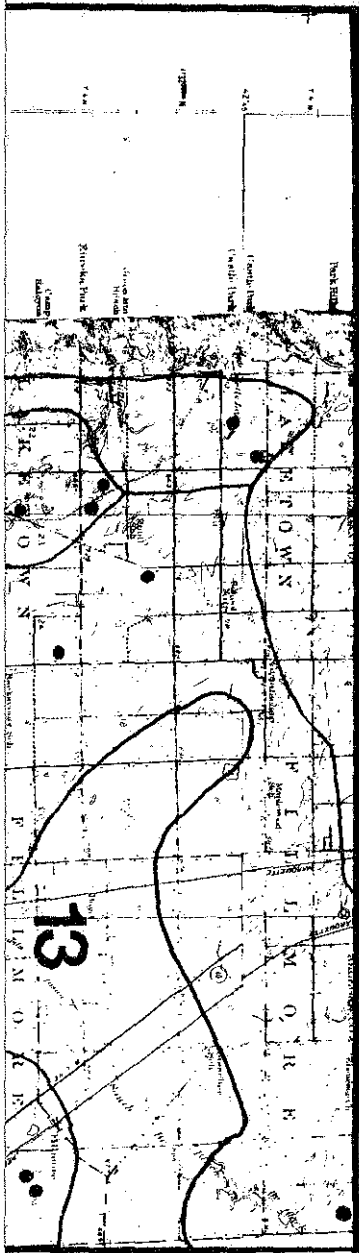
Table 3

Description of Soil Associations in the Survey Area

- (Primary Sources: Map of Soil Associations, Kalamazoo, Black, Macatawa and Paw Paw Rivers Basin, USDA, 1976.
Native species and woodland suitability data from:
Soil Survey of Ottawa County, Michigan, USDA, 1972:81-86.)
- (1) Blount-Morley Association. Medium textured soils that lie on nearly level to gently sloping topography; developed in predominantly clay, clay loam and silty clay glacial till. Internal drainage varies but all have low permeability rates. Native species for Blount soils are white oak, red oak, basswood, soft maple, white ash and cottonwood; for Morley soils, sugar maple, red oak, basswood, black cherry, and black walnut. Potential productivity for Blount soils is low to medium for oak and mixed hardwoods; for Morley soils productivity is very high for mixed hardwoods, high for oak.
 - (3) Oakville-Spinks-Oshtemo Association. Coarse textured soils of the "pine plains". These soils occur on nearly level to steep topography; developed in sand, sandy loam, and stratified sand and gravel. They are well drained with high permeability. For Spinks soils native species are white pine, red oak, white oak, aspen and beech. Potential productivity is high to very high for pine, medium for oak, and low to medium for mixed hardwoods. For Oshtemo soils native species are oak, sugar maple, basswood and beech; potential productivity is low to medium for oak and mixed hardwoods, and medium to high for pine.
 - (4) Kalamazoo-Oshtemo Association. Coarse textured soils on level to gently rolling topography; developed in sandy clay loam, sandy loam, and clay loam overlying stratified sand and gravel. Well drained, with medium to high permeability. For Oshtemo soils native species are oak, sugar maple, basswood and beech. Potential productivity is low to medium for oak and mixed hardwoods and medium to high for pine. In the Middle Kalamazoo Valley climax oak-hickory forest occurs on Kalamazoo-Oshtemo soils, together with black walnut ash and poplar; potential productivity of these soils is reported to be very high (Cremin and Marek 1978:15).
 - (7) Oakville Association. Coarse textured soils lying on steep topography; developed in sand or loamy sand dunes and outwash material. Well drained soils. Beech, maple and hemlock are adapted native forest species along the Lake Michigan shoreline (Neusius 1978:13). Beech may occur on outwash and other poor soils near Lake Michigan because of increased humidity (pers. comm., Ted Piwowar, Allegan Co. Soil Conservation Office).

- (8) Adrian-Houghton Association. Organic soils developed on muck over peat. They are level to depressional soils with very poor drainage; the water table is at or near surface most of the year. Native species are soft maple, white cedar and willow.
- (11) Granby-Au Gres Association. Coarse textured soils developed in deep outwash sands. They are level to depressional and poorly drained. Native species for Granby soils are soft maple, white ash, pin oak, white birch. Potential productivity is low to very low for mixed hardwoods. Native species for Au Gres soils are aspen, soft maple, white pine, white birch, and pin oak; productivity is very low for oak and mixed hardwoods.
- (12) Miami-Hillsdale Association. Medium to coarse textured soils on rolling to steep topography. Developed on glacial drift and till ranging from sandy loam, loam and silt loam, to sandy clay loam. Well drained soils with medium permeability rates. These soils are favorable for the growth of mixed hardwoods and oaks.
- (13) Selfridge-Metea-Spinks Association. Coarse textured soils on level to gently sloping topography. Developed in loamy sands overlying clay loam, sandy clay loam, silt loam, and sand glacial drift or till. Soils range from well drained to somewhat poorly drained and have a medium to high permeability rates. Selfridge soils are poorly drained and native vegetation would have been conifers and lowland hardwoods such as red maple, silver maple, white ash and cottonwood. Metea-Spinks soils favor mixed hardwoods, including black walnut on Metea (pers. comm., Ted Piwovar, Allegan County Soil Conservation Office).





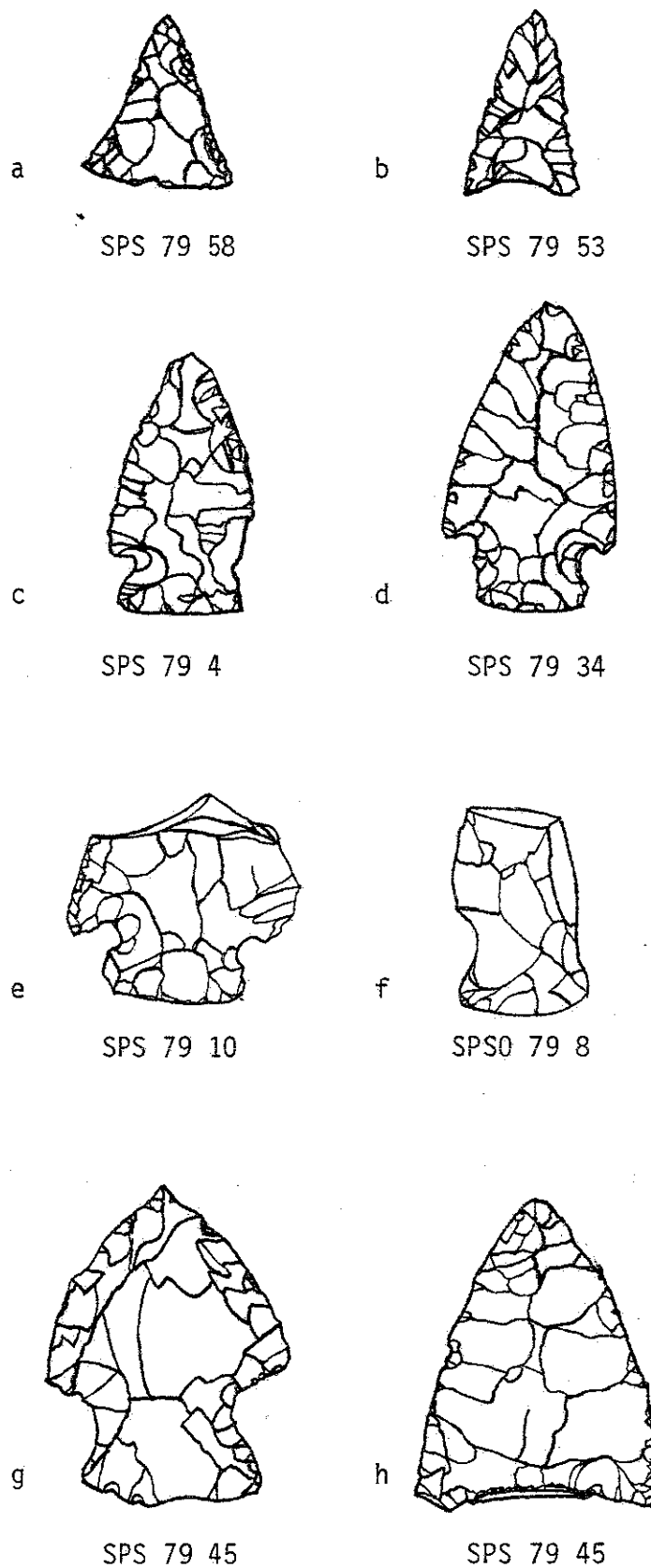


Figure 1. Diagnostic bifaces from 1979 Survey:
a,b - Late Woodland; c-h Archaic.

Section 6-A. Interpretations Based Upon Observed Site Distributions

The Settlement Pattern Survey in 1978 and 1979 identified a total of 271 prehistoric sites in the targeted sampling units. At the end of the 1979 season a 20% random sample of 7 townships in western Allegan County had been completed. A breakdown of these results by township (stratum) and cultural-chronological position of identifiable sites is summarized in Table 4.

Township (stratum)	Units Surveyed (No. of acres)	Total No. of Sites	Identified Sites/Components		
			Paleo-Indian	Archaic	Woodland
Laketown	17 (2720)	23	-	7	1
Fillmore	29 (4640)	28	-	4	-
Saugatuck	22 (3520)	78	2	16	14
Manlius	29 (4640)	70	-	15	19
Ganges	25 (4000)	35	-	10	3
Clyde	29 (4640)	6	-	-	2
Casco	32 (5120)	31	1	4	-
Totals		271	3	56	39

Table 4. Number of Sites in Sampling Units by Stratum and Cultural-Chronological Stage

It should be noted that the four lakeshore townships (Laketown, Saugatuck, Ganges, Casco) differ in size compared to the interior townships, due to the irregular shoreline of Lake Michigan. Laketown

Township is slightly more than half the size of Fillmore, for example, so that the Laketown site density is significantly higher than Fillmore, despite similar site totals. By the same criterion, Saugatuck Township, with 25 units surveyed, has a proportionately higher site density than the site totals indicate.

Most striking in terms of overall site densities are the high site concentrations in Saugatuck and Manlius Townships which between them contain 148 sites, more than half (54.6%) of the sites in the 7 township universe. A major focus of aboriginal settlement on or near the Kalamazoo and its main tributary, the Rabbit River, which traverse these two townships is evident from the site distributions plotted on Map 8.

While Archaic period sites are numerous along the bluffs of the Kalamazoo and Rabbit (Map 9), Archaic sites are also dispersed rather widely in locations away from the major river system associated principally with Soil Associations 1 and 4, and with morainic topography (Maps 9, 12). By contrast the Woodland sites are concentrated on or near the Kalamazoo River in Manlius and Saugatuck Townships, with 33 sites (84.6% of Woodland sites) in these two townships. Only 6 Woodland sites were found in the other 5 townships, with none at all being recorded in Fillmore and Casco townships. These data from the 1979 survey serve to underscore still further the Woodland period shift toward greater exploitation of riverine and riverine marsh resources which was suggested by the 1978 Settlement Pattern Survey results (Garland and Kingsley 1979:66).

It is of considerable interest to note that the Black River drainage in Casco Township does not appear to have been a region which

attracted Woodland occupation. The lower reaches of the Black in the southwest part of the township may have been a more favored area for settlement than the areas surveyed in our 20% sample, and it would be useful to conduct further survey here to investigate this. However, we can certainly conclude on the basis of our survey data that Woodland settlement-subsistence preference was strongly oriented toward the resources of the Lower Kalamazoo and upland regions closely adjacent to it.

The presence of only 6 sites in our targeted 20% sample for Clyde Township reflects the predominance of poorly drained soils (Granby-Au Gres, Association 11) and the low resource productivity of the "pine plains" which correlate with glacial lake bed sands and Soil Association 3 (Map 8). Also, it might be noted that three of the 6 sites are in the northern tier of sections, closest to the Kalamazoo River.

The relatively sparse site distribution in Fillmore Township correlates with its location north of the Kalamazoo River and largely north of the Rabbit River Bluffs. The interior location of Fillmore relative to Lake Michigan also appears to be a factor, given the greater site densities on similar soils and landforms in Laketown Township (Maps 8, 11).

Distance from Lake Michigan may be a factor in the very low site density in Clyde Township also, although as discussed above, poor drainage and low soil productivity are probably more significant. Examination of distributions in Casco and Ganges Townships indicates highly significant site correlations with morainic uplands and with locations along the Black River.

Section 6-B. Statistical Analysis of Data

A statistical analysis of the Settlement Pattern Survey data from the 1978 and 1979 field seasons is being undertaken by Deborah Rhead, who expects to complete her Master's thesis on this subject in December 1980. During the Winter semester of 1980 we received assistance from various persons in the Statistical Laboratory at Western Michigan University, Dr. Gerald Sievers, Director. In particular Dr. Janice DuBien consulted with Rhead on developing procedures for a cluster analysis of the survey data. This involved discussion of the nature of the problem, the selection of appropriate variables, and the choice of appropriate clustering algorithms to fit this problem. Dr. DuBien modified her own clustering computer program to handle the large data set, did several runs of the program and assisted in analysis and interpretation of the resulting computer output.

The clustering analysis treats 271 sites, i.e. all sites in the targeted random sample units in the 1978 and 1979 Surveys. Three different methods of clustering were run on the PDP-10 computer: flexible linkage, complete linkage, and average linkage. These three methods produced somewhat different clusters of sites, but importantly, some sites were consistently grouped together by all three methods. Interpretation of these clusters based upon cultural-chronological placement of the sites and environmental variables continues at this writing.

A land unit based analysis is being done, a multiple regression which should identify which environmental variables are important for Archaic and Woodland sites respectively.

Section 7. Recommendations for Further Research; Management of Cultural Resources in the Study Area.

More information on subsistence practices is needed both from sites along the major river and from off-river locations in order to elucidate various aspects of resource procurement based upon a seasonally scheduled annual round. Robert Kingsley (1979) has put forward a number of hypotheses regarding the Late Allegan phase settlement system in the Lower Kalamazoo drainage. It is anticipated that further analysis of SPS data coupled with a program of selected site excavation will add significantly to our knowledge of settlement systems in the Lower Kalamazoo for the Archaic period as well as the Woodland.

The major cause of damage to sites in the SPS-79 study area is farming activities. Sand mining, recreational vehicle use on State land, and road improvements also take their toll, but impact on sites from these sources is not a major concern in the townships surveyed in 1979.

The discovery of an "out" site at Ely Lake Campground in Clyde Township suggests that other sites may exist on this and nearby lakes in the Allegan State Game Area. Although we did not survey in Lee Township, we suspect that private development around lakes here may be resulting in significant site loss.

It is hoped that a program of site testing, expected to get underway in 1981, will enable us to refine our statements about SPS site significance, and to make further recommendations about relative importance of sites in the Lower Kalamazoo region with respect to impact by future land use.

References

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W.M.U. ARCHAEOLOGICAL SURVEY FORM
SPS 1979

State # 20 AE

Date _____

Recorder _____

Co. _____ Twp. _____ Site # SPS-79- _____

Sec. _____; _____ of the _____ 1/4.

USGS Quad _____ Elev. _____ Previous # _____

Owner _____ Address _____ Phone _____

Attitude _____ Flooding? (how, much) _____
when

Previously Recorded? (who, when) _____

Previous Collection (who, where) _____

General Site Description (topography) _____

Site Condition	Test Excavation	Current Vegetation	Past Vegetation	F.C.R.
<input type="checkbox"/> Undisturbed	<input type="checkbox"/> Pot sherds	<input type="checkbox"/> Cultivated	<input type="checkbox"/> Cultivated	<input type="checkbox"/> None
<input type="checkbox"/> Cultivated	<input type="checkbox"/> Chippage	<input type="checkbox"/> Grasses	<input type="checkbox"/> Grasses	<input type="checkbox"/> Light
<input type="checkbox"/> Wind erosion	<input type="checkbox"/> Biface	<input type="checkbox"/> Shrubs	<input type="checkbox"/> Shrubs	<input type="checkbox"/> Medium
<input type="checkbox"/> Water erosion	<input type="checkbox"/> Uniface	<input type="checkbox"/> Softwoods	<input type="checkbox"/> Softwoods	<input type="checkbox"/> Heavy
<input type="checkbox"/> Potted	<input type="checkbox"/> Ground Stone	<input type="checkbox"/> Hardwoods	<input type="checkbox"/> Hardwoods	
<input type="checkbox"/> Construction	<input type="checkbox"/> Shell	<input type="checkbox"/> Conifer	<input type="checkbox"/> Conifer	
<input type="checkbox"/> Other:	<input type="checkbox"/> Bone	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	
	<input type="checkbox"/> Historic			
	<input type="checkbox"/> Other:			

Site Density

Isolated find
 Sparse scatter
 Scatter
 Dense scatter

Surface Collection

Potsherds
 Chippage
 Biface
 Uniface
 Ground stone
 Bone
 Historic
 Other:

Max. Site Length _____

Max. Site Width _____

Max. Site Size _____

Features

None
 Midden
 Hearth
 Pit
 Other:

Classification/Cultural Affiliation

Soil Association (from General Soil Map)

<input type="checkbox"/> Paleo	<input type="checkbox"/> E. Woodland	<input type="checkbox"/> #1	<input type="checkbox"/> #8
<input type="checkbox"/> Archaic	<input type="checkbox"/> M. Woodland	<input type="checkbox"/> #2	<input type="checkbox"/> #9
<input type="checkbox"/> E. Archaic	<input type="checkbox"/> L. Woodland	<input type="checkbox"/> #3	<input type="checkbox"/> #10
<input type="checkbox"/> M. Archaic	<input type="checkbox"/> Miss.	<input type="checkbox"/> #4	<input type="checkbox"/> #11
<input type="checkbox"/> L. Archaic	<input type="checkbox"/> Historic	<input type="checkbox"/> #5	<input type="checkbox"/> #12
<input type="checkbox"/> Woodland	<input type="checkbox"/> Undetermined	<input type="checkbox"/> #6	<input type="checkbox"/> #13
	<input type="checkbox"/> (guess?)	<input type="checkbox"/> #7	<input type="checkbox"/> #14

Surface Formation

Soil Type

Position of Site in Regard to Shelter by Land Form

<input type="checkbox"/> Dune	<input type="checkbox"/> Clay	<input type="checkbox"/> None
<input type="checkbox"/> Tillplain	<input type="checkbox"/> Silt	<input type="checkbox"/> Leeward
<input type="checkbox"/> Moraine	<input type="checkbox"/> Sand	<input type="checkbox"/> Windward
<input type="checkbox"/> Outwash plain	<input type="checkbox"/> Gravel	<input type="checkbox"/> Not able to determine
<input type="checkbox"/> Lake bed	<input type="checkbox"/> Organic	
<input type="checkbox"/> Glacial shoreline		
<input type="checkbox"/> Other:		

Distance to Nearest Water:

Water Association

Direction to Nearest Water:

- Kalamazoo
- Rabbit/Black
- Third order (_____)
- Fourth order (_____)
- Lake Michigan shore
- Riverine swamp
- Upland swamp
- Inland lake (_____)
- No association

Spring nearby? Yes/No

Alteration of main water source? Yes/No

Site Priority/Why

Other notes:

- High _____
- Med. _____
- Low _____

W.M.U. ARCHAEOLOGICAL SURVEY UNIT FORM
SPS 1979

Date _____

Recorder _____

Co. _____ Twp. _____ Sec. _____

_____ of the _____ 1/4. USGS Quad _____

Elev. _____

<u>Land Condition</u>	<u>Current Vegetation</u>	<u>Soil Association(s) (from General Soil Map)</u>	
_____ % Undisturbed	_____ % Cultivated	_____ % #1	_____ % #8
_____ % Cultivated	_____ % Grasses	_____ % #2	_____ % #9
_____ % Construction	_____ % Shrubs	_____ % #3	_____ % #10
_____ % Other:	_____ % Softwoods	_____ % #4	_____ % #11
_____	_____ % Hardwoods	_____ % #5	_____ % #12
_____	_____ % Conifer	_____ % #6	_____ % #13
_____	_____ % Other:	_____ % #7	_____ % #14
_____	_____	_____	_____

Sites Present

_____ None	_____ E. Woodland
_____ Paleo	_____ M. Woodland
_____ Archaic	_____ L. Woodland
_____ E. Archaic	_____ Miss.
_____ M. Archaic	_____ Historic
_____ L. Archaic	_____ Undetermined
_____ Woodland	

Water Associations

_____ Kalamazoo
_____ Rabbit/Black
_____ Third order (_____)
_____ Fourth order (_____)
_____ Lake Michigan shore
_____ Riverine swamp
_____ Upland swamp
_____ Inland lake (_____)
_____ No association

Surface Formation

_____ % Dune
_____ % Tillplain
_____ % Moraine
_____ % Outwash plain
_____ % Lake bed
_____ % Glacial shoreline 605'
_____ % Glacial shoreline 640'
_____ % Other:

Distance to Nearest Water:

Direction to Nearest Water:

Soil Type

_____ % Clay
_____ % Silt
_____ % Sand
_____ % Gravel
_____ % Organic

Other Notes:

Springs: Yes/No

Alteration of water sources?
Yes/No

Number of Acres Covered
by Shovel Probe: _____

Number of Sites Discovered
by Shovel Probe: _____

(If not in unit)

WESTERN MICHIGAN UNIVERSITY

DEPARTMENT OF ANTHROPOLOGY

KALAMAZOO, MICHIGAN
49008

Dear Landowner,

Western Michigan University, in cooperation with the Michigan History Division of the Department of State, is currently conducting an archaeological survey of selected portions of Allegan County. We are interested in locating and recording Early Historic sites and Prehistoric Indian sites. We would also like to inquire if you have any knowledge of such site locations or artifact collections from the area.

Next spring from April 30th-June 20th, our survey crews will be working in randomly selected quarter sections of Allegan County. During the first week (April 30th-May 4th) we would like to concentrate our efforts in Fillmore Township. Your property is located in one of our targeted sample quarter sections. In order to allow us to plan our project most efficiently, we would appreciate your permission at this time to walk over your property. No excavation will be done, and crops will not be disturbed. If some weeks are more convenient for your schedule, please let us know.

Your cooperation in returning the enclosed card will be a great aid to the success of our project, and would be greatly appreciated. We will try to contact you again next spring before surveying your property. Thank you for your cooperation.

Sincerely,

Dr. Elizabeth B. Garland
Project Director
Department of Anthropology
Western Michigan University

Deborah K. Rhead
Graduate Research Assistant
Department of Anthropology
Western Michigan University

EG;DR:mgs

Enclosure