

THE CHRONOLOGICAL POSITION OF THE CRS SITE, SIMCOE COUNTY, ONTARIO

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ABSTRACT

Through the application of the coefficient of similarity test (Emerson, 1966, 1968) on the ceramics excavated from the CRS site, the chronological position and cultural affiliation of this site was established. The ceramic vessel and pipe analyses of the recovered materials indicate the site to be a very Late Prehistoric Huron village occupied between A.D. 1550 and A.D. 1580.

INTRODUCTION

The preliminary excavation of the CRS site (from 1968-1973) was undertaken with the hopes of establishing the site's proper cultural and temporal position. Further studies of cultural processes could then proceed once the cultural and chronological position of the CRS site was evaluated.

It has been the aim of this research to utilize the coefficient of similarity test as one method of determining the chronological placement and cultural affiliation of this site. The following is the study of the ceramics excavated from the CRS site. Simcoe County, Ontario (Figure 1, taken from Emerson, 1968, p. 63).

SITE DESCRIPTION

The exact location of the CRS site has been withheld by personal request of the landowner. The site lies approximately one-half mile east of Hog Creek and approximately 3-1/2 miles south of Sturgeon Bay. The site sits within the 900 foot contour line about 320 feet above the water level of Georgian Bay.

Within a 2 mile radius of the site the soils are generally deep, moderately well drained, and have a good water holding capacity. The land is considered to have no limitations to the growth of commercial forests and major tree species of this area include red pine, hard maple, and white spruce. Maple, beech, oak, white pine, elm, birch, basswood, and ash are all tree species of the original Huronia forests (Tooker, 1969). For agricultural purposes the only limiting factors are an adverse topography and large boulders of glacial origin. The number of frost-free days ranges from 140 to 160 days with a usual growing season of 180 to 200 days.

The site is estimated to extend at least 350 feet along the north-south axis and 300 feet along the east-west axis (Figure 2). The majority of the site remains undisturbed although along the eastern edge the land has been cleared of large boulders and plowed. The site is relatively flat with a gradual increase in elevation from north to south. Along the eastern, northern, and western limits there is a sharp drop from 30 to 50 feet. The land on which the site rests is now used for pasture and has never been cleared of rocks or trees for plowing.

The excavations included 2 midden areas located on the northern and western sides of the site. The excavated part of Midden A was approximately 20 feet by 45 feet and ran to a depth of 2 feet. A small area 20 feet by 20 feet was excavated from a large midden deposit (Midden B) on the western side of the site. The depth varied from 8 inches to 2 feet. The excavated areas of Midden A and Midden B are referred to as Unit A and Unit B respectively.

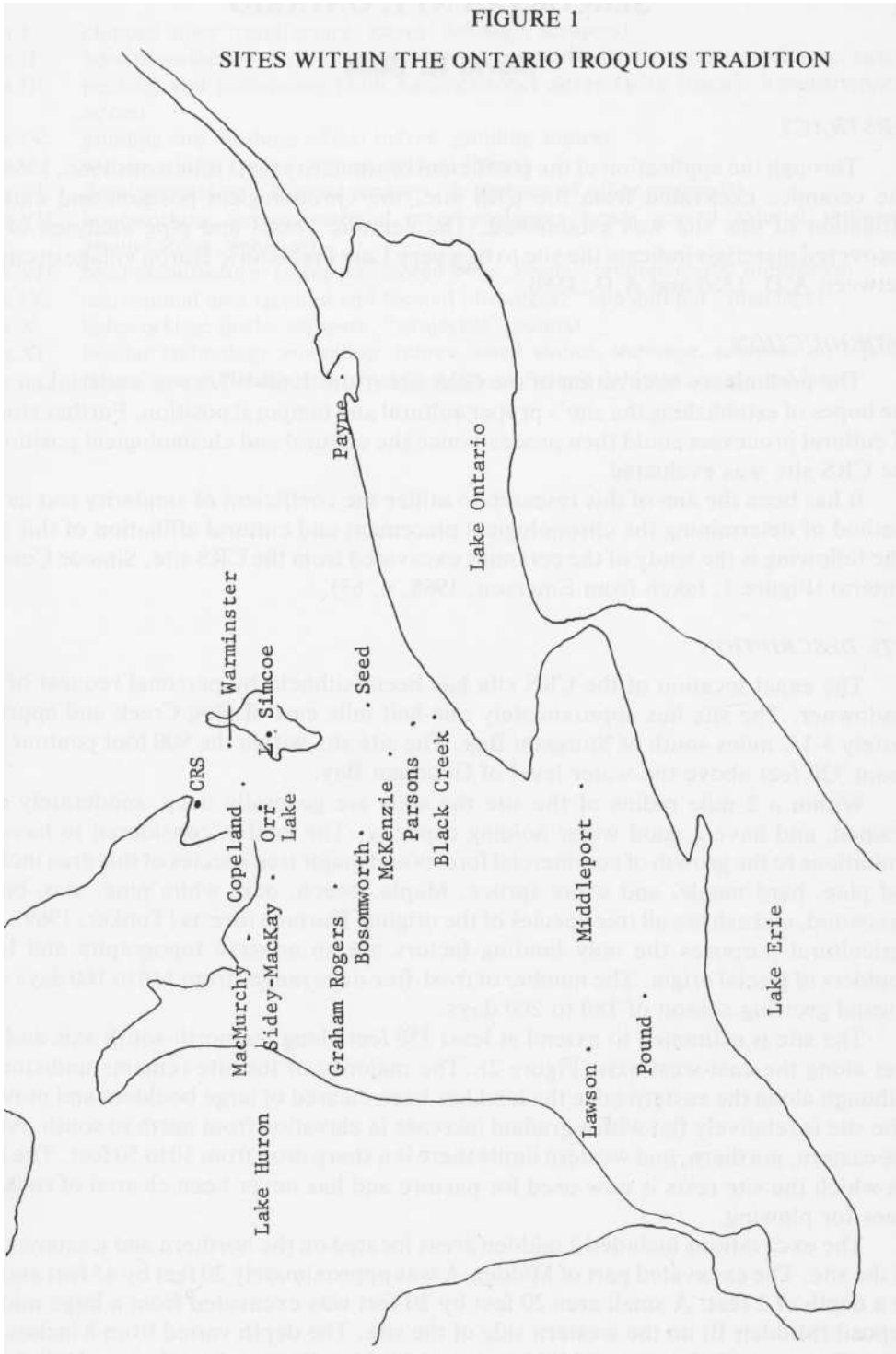
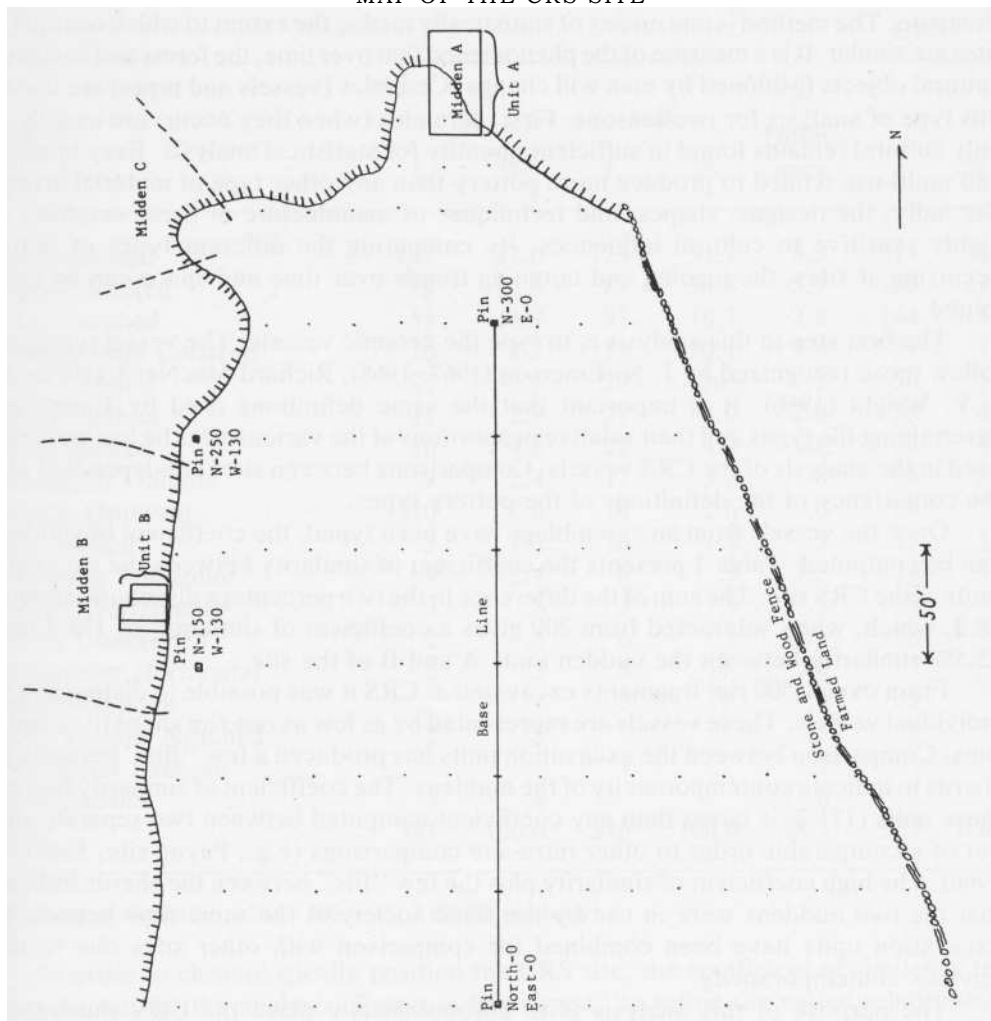


FIGURE 2
MAP OF THE CRS SITE



CERAMIC VESSEL ANALYSIS

The following study will utilize J. N. Emerson's work with the coefficients of similarity (or agreement) test (1966, 1968). The method was first introduced by Brainerd and Robinson (1951) and later applied specifically to the Ontario Iroquois problem by Emerson. The method is one means of statistically testing the extent to which occupation sites are similar. It is a measure of the phenomenon that over time, the forms and designs of cultural objects fashioned by man will change. Ceramics (vessels and pipes) are used in this type of analysis for two reasons. First, ceramics (when they occur) are usually the only cultural remains found in sufficient quantity for statistical analysis. Easy breakage and multi-use tended to produce more pottery than any other type of material artifact. Secondly, the designs, shapes, and techniques of manufacture of these ceramics are highly sensitive to cultural influences. By comparing the different types of pottery occurring at sites, the ingoing and outgoing trends over time and space can be determined.

The first step in this analysis is to type the ceramic vessels. The vessel typing will follow those recognized by J. N. Emerson (1967; 1968), Richard MacNeish (1952), and J. V. Wright (1966). It is important that the same definitions used by Emerson in determining the types and their relative proportions at the various sites he has studied be used in the analysis of the CRS vessels. Comparisons between sites are dependent upon the consistency of the definitions of the pottery types.

Once the vessels from an assemblage have been typed, the coefficient of similarity can be computed. Table 1 presents the coefficient of similarity between the excavation units of the CRS site. The sum of the difference in the two percentage distributions equals 28.3, which, when subtracted from 200 gives a coefficient of similarity of 171.7 or an 85.5% similarity between the midden units A and B of the site.

From over 1,500 rim fragments excavated at CRS it was possible to distinguish 927 individual vessels. These vessels are represented by as few as one rim sherd to complete rims. Comparison between the excavation units has produced a few "fits" between rim sherds to indicate contemporaneity of the middens. The coefficient of similarity between these units (171.7) is larger than any coefficient computed between two separate sites, but of a comparable order to other intra-site comparisons (e.g., Payne site, Emerson, 1966). The high coefficient of similarity plus the few "fits" between the sherds indicates that the two middens were in use by the same society at the same time period. The excavation units have been combined for comparison with other sites due to their obvious contemporaneity.

The purpose of this analysis is to chronologically place the CRS site into the Huron-Petun development. The addition of the Copeland site (Channen and Clark, 1965) in this study is undertaken to increase the comparative value of the analysis. To include the Copeland site into this analysis, one alteration had to be made in the list of pottery type frequencies and percentages. J. V. Wright (personal communication, 1974) feels that the Copeland Incised pottery type (64 specimens) should not be considered a valid type and should be broken down into the Warminster Horizontal type (22 specimens) and the Ontario Horizontal type (42 specimens). With this change the percentages of the pottery types at the Copeland and CRS sites were computed and included into the percentage distribution table of the 15 sites studied by Emerson (1968:42). Table 2 lists the various percentages of pottery types found at the 17 sites.

TABLE 1
PERCENT DISTRIBUTION OF VESSEL TYPES AT CRS

Pottery Type	Excavation Unit				% Difference	Combined CRS	
	A		B			f	%
	f	%	f	%		f	%
Huron Incised	141	37.0	173	31.7	5.3	314	33.9
Lawson Incised	78	20.5	81	14.8	5.7	159	17.2
Sidey Notched	53	13.9	91	16.7	2.8	144	15.5
Lalonde High Collared	16	4.2	55	10.1	5.9	71	7.6
Sidey Crossed	21	5.5	29	5.3	.2	50	5.4
Pound Necked	11	2.9	27	4.9	2.0	38	4.1
Black Necked	16	4.2	22	4.0	.02	38	4.1
Middleport Oblique	9	2.4	17	3.2	.8	26	2.8
Lawson Opposed	10	2.6	14	2.6	.0	24	2.6
Seed Incised	5	1.3	10	1.8	.5	15	1.6
Onondaga Triangular	9	2.4	5	.9	1.5	14	1.5
Ontario Horizontal	3	.8	5	.9	.1	8	.9
Durfee Underlined	2	.5	6	1.1	.6	8	.9
Warminster Horizontal	2	.5	5	.9	.4	7	.8
Ontario Oblique			5	.9	.0	5	.5
Dutch Hollow Notched	2	.5			.5	2	.2
Warminster Crossed			1	.1	.1	1	.1
Miscellaneous	3	.8			.8	3	.3
Total	381	100.0	546	100.0	28.3	927	100.0

Coefficient of Similarity = $28.3 - 200 = 171.7$ (85.5% similarity)

In order to chronologically position the CRS site, the coefficient of similarity test was selected for the analysis. Emerson has hoped "to refine the varied relationships between the sites studied by calculating the coefficients of similarity" (1968:41). The sites studied number 14, ranging in time from the Middle Ontario Iroquois stage (A.D. 1350) to the last of the historic sites of the Huron-Petun Branch of the Late Ontario Iroquois stage (A.D. 1650). Emerson feels that the relationships between the sites can be determined by proper analysis. The closer the relationship in time and space the more similar the pottery types should be, resulting in a higher coefficient of similarity.

Wright has built a framework from the archaeological data of southern Ontario and Western New York which he calls "The Ontario Iroquois Tradition" (Wright, 1966). The sites he examines range in time from A.D. 1000 to A.D. 1650. The Ontario Iroquois Tradition has been divided into three stages-Early, Middle, and Late. It is the Late stage of the Ontario Iroquois Tradition that will be relevant to this investigation.

TABLE 2
PERCENTAGE DISTRIBUTIONS OF CERAMIC VESSELS

Type	S I T E	Warminster	Orr Lake	MacMurphy	Graham-Rogers	Seed	Sidey-MacKay	CRS	McKenzie	Copeland	Black Creek	Parsons	Payne	Bosomworth	Middleport	Lawson	Pound	Uren
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Ontario Horizontal	1	1				1	1	.9	4	1.6	12							
Ontario Horizontal	1	1				1	1	.9	4	1.6	12		3	1	1	35	24	48
Ontario Oblique								5			.1					8		21
Uren Noded																		7
Uren Dentate																		4
Uren Corded																		2
Niagara Collared					1						2				18	2		1
Iroquois Linear										.1								15
Lawson Incised	1	2		1	6	5	17.2	11	7.1	11	31	22	47	52	12	7	1	
Middleport CrissCross																17	3	
Middleport Oblique								2.8		2.1	3		5			15	16	
Pound Blank												1					3	
Pound Necked								4.1				3	11	12	3	11	5	46
Lawson Opposed			2			3	4	2.6	2			3	15	12	4	11		
Black Necked	2	3				4	5	4.1	2	21.3	30	8	20	19				
Sidey Crossed			1			1	3	5.4	1	3.8								
Seed Corded				1		10			2									
Seed Incised		1	2	4	26	8	1.6	7			1				1			
Warminster Horizontal	13			1		1	.8	5	2.6					1				
Huron Incised	44	45	33	14	30	28	33.9	35	21.2	23	16	12	11	1				
Sidey Notched	13	11	48	53	5	22	15.5	19	13.3				1					
Warminster Crossed	22	10		2	1	8		1	1.4				1	1				
Lalonde High Collared				2	1			7.6		24.7		3	1	12				
Dutch Hollow Notched				2	4	2		.2		.1		1	5					
Durfee Underlined						1	2	.9	1		1		2					
Onondaga Triangular							1	1.5	4			2	10	1				
Richmond Mill Incised				1	1	3			1			2						
Roebuck Low Collar					1	1					1							
Swarthout Dentate																		
Cayuga Horizontal						1			5									
Cayadutta Incised						1	4		3									
Syracuse Incised					1	1												
Baum Corded					2													
Genoa Frilled		2	20															
Seneca Barbed		1	1															
MacMurphy Plain Scalloped				1														
Collingwood Horizontal				1														
MacMurphy Scalloped				2														
Blue Mountain Grooved				1														
Blue Mountain Punctate				1														
Collingwood Collarless				1														
Susquehannock High Collared					10													
Graham-Rogers Plain					1													
Innisfil Plain					1													
Innisfil Collarless					1													
Miscellaneous		1	3	4	6	2	4	.3	2	.6	1	4		2	4	6	1	1
Total		100	100	99	104	97	100	100	104	100	95	100	100	100	99	100	100	100

The Late Ontario Iroquois stage develops directly from the Middleport substage and eventually developed into the historic Neutral-Erie, and the historic Huron-Petun. The CRS site is located in the area of the Huron-Petun Branch.

For the most part, the Huron-Petun Branch has been analyzed according to ceramic distributions. Within the Huron-Petun Branch there exists a Northern and a Southern division. Materially the major difference between these divisions is the high percentage of the Lalonde High Collar pottery type found on Northern Division sites (Wright, 1966). The occurrence of worked deer phalanges is another diagnostic difference between the Northern and Southern Divisions. In the Southern Division, the toggle or faceted form appear later in the sequence than the cup-in-pin form. The Northern Division sites never had the toggle form of the worked deer phalange. Between A.D. 1400 and A.D. 1550 there appears to be a certain amount of separation between the two divisions (Wright, 1966).

During the middle and late 16th century, there was a general shift northward of cultural traits that eventually fused the two divisions. The fusion of the Northern and Southern Divisions was the final developmental stage of the Huron-Petun Branch of the Late Ontario Iroquois stage (Wright, 1966:74). The fusion of the divisions is represented by the occurrence of at least 50 percent of the pottery sample being of the Huron Incised and Sidey Notched variety. Also the toggle variety of the worked deer phalange has replaced the cup-in-pin form. Pipe stem decoration, effigy pipes, and coronet pipes have started to appear in what was considered the Northern Division. Recently it has been suggested that the final major cultural change occurring before historic times is the development of the Petun from various Huron populations (Ramsden, 1968:109; Noble, 1974:17).

Table 3 contains the coefficients of similarity computed between the 17 sites. Copeland shares its greatest similarity with the CRS site. Copeland is then more similar to Black Creek, Sidey-MacKay, Bosomworth, Payne, and McKenzie in decreasing proportions. Copeland apparently has little if any relationship with Lawson, Middleport, and Pound sites. The Copeland site has a more tenuous association with the Graham-Rogers, MacMurphy, Warminster, Orr Lake, Seed and Parsons sites. For the moment, discussion of the relationship with the CRS site will be postponed.

Aside from CRS, Copeland appears most similar to the Black Creek site. Black Creek is considered to be a Southern Division site dating around A.D. 1450 (Emerson, 1966; Wright, 1966; Noble, 1974). The fact that McKenzie and Payne (also Southern Division sites) appear to have moderate connections with Copeland attest Copeland's existence before the fusion of the Northern and Southern Divisions. The occurrence of only the cup-in-pin worked deer phalange, 34.5% of the ceramic vessel assemblages being Huron Incised and Sidey Notched, the absence of coronet pipes, and its geographical location seems to place the Copeland site in the Northern Division of the Huron-Petun Branch (Wright, 1966). Copeland's relationship with the Sidey-MacKay and Bosomworth sites also suggest a late prehistoric dating for this site circa A.D. 1500 (Wright, 1966; Channen and Clark, 1965). Sidey-MacKay and Bosomworth are early fusion sites and one would expect these sites would have many similarities with a late Northern Division site. Copeland is apparently a late Northern Division site showing some relations with Southern Division sites due to contemporaneity and showing some relations with early fusion sites due to its participation in the developmental process. The later historic sites show a lower coefficient of similarity indicating less of an association.

Wright's date of A.D. 1500 for the Copeland site is confirmed by the total analysis of the vessels recovered at the Copeland site. The greatest similarity of the Copeland site with the CRS site now suggests a late prehistoric dating for the CRS site.

TABLE 3
COEFFICIENTS OF SIMILARITY BASED UPON VESSEL TYPES

	Orr Lake	Warminster	Graham-Rogers	MacMurchy	Sidey-MacKay	McKenzie	CRS	Seed	Copeland	Bosomworth	Parsons	Payne	Black Creek	Lawson	Middleport	Pound
Orr Lake	X	144	63	99	104	110	110	92	81	40	46	46	64	14	6	6
Warminster	144	X	65	101	106	106	97	82	84	42	38	38	65	6	4	4
Graham-Rogers	63	65	X	145	87	86	65	61	60	28	34	44	36	8	4	2
MacMurchy	99	101	145	X	112	120	106	88	74	26	38	36	48	4	0	0
Sidey-MacKay	104	106	87	112	X	143	127	122	102	54	63	68	85	26	13	12
McKenzie	110	106	86	120	143	X	138	122	106	54	70	72	96	32	30	22
CRS	110	97	65	106	127	138	X	108	123	93	87	102	108	55	41	30
Seed	92	82	61	88	122	122	108	X	82	52	60	68	84	26	14	14
Copeland	81	84	60	74	102	106	123	82	X	102	68	94	112	19	22	21
Bosomworth	40	42	28	26	54	54	93	52	102	X	119	124	96	112	32	22
Parsons	46	38	34	38	63	70	87	60	68	119	X	136	86	108	34	38
Payne	46	38	44	36	68	72	102	68	94	124	136	X	118	94	50	54
Black Creek	64	65	36	48	85	96	108	84	112	96	86	118	X	44	62	50
Lawson	14	6	8	4	26	32	55	26	19	112	108	94	44	X	40	38
Middleport	6	4	4	0	13	30	41	14	22	32	34	50	62	40	X	108
Pound	6	4	2	0	12	22	30	14	21	22	38	54	50	38	108	X

The CRS site has a very high coefficient of similarity with the McKenzie site. McKenzie is considered a protohistoric site in the Southern Division of the Huron-Petun Branch (Wright, 1966; Noble, 1968, 1974). This indicates strong influences at the CRS site from southern orientations. The next highest similarity with CRS is the Sidey-MacKay site. Sidey-MacKay is an early historic site occurring after the fusion of the divisions. The strong association of the CRS site to these two sites suggest that CRS is an early fusion site in existence sometime very late in prehistoric Huron times (A.D. 1550-1600).

The lack of any historic trade goods located on the CRS site attests to its being occupied prior to the beginnings of the protohistoric period. The protohistoric period has been defined by Noble as the span of time between the initial appearance of European trade goods in Huronia (A.D. 1580) and the presence of Europeans themselves in A.D. 1609 (Noble, 1968). Therefore, it is proposed the actual occupation of CRS occurred between A.D. 1550 and A.D. 1580.

Examination of Table 3 reveals that the Copeland and CRS sites have a high coefficient of similarity, although the CRS site has even stronger associations with the MacKenzie and Sidey-MacKay sites. This would once again indicate an early fusion dating for the CRS site. Copeland was undoubtedly in existence before the CRS site and many of the Northern Division traits were still influencing cultural material.

The Warminster and Orr Lake sites of historic Huron time appear to share much with the CRS site. The CRS's moderate relationship with the historic MacMurchy site is continued evidence for a dating of the CRS site sometime late in the 16th Century.

Looking just at the coefficients of similarity computed between CRS and the other 16 sites, CRS has a higher coefficient on the average with fusion sites. CRS also shows strong associations with late sites of both the Northern and Southern Divisions. For these reasons alone, it is quite feasible to place CRS at the beginning of the fusion of the two divisions. Considering the geographic position of the CRS site, southern influences so far north before fusion times is highly unlikely. The Huron Incised and Sidey Notched ceramic types represents 49.4% of the total assemblage. This can also be viewed as an indicator of the early fusion position of the CRS site.

The relationship of CRS with other sites tend to support Emerson's theories of the directions of style flows. Emerson proposed that about A.D. 1500 ceramic trends and influences moved northward from the Southern Division. He felt that about A.D. 1550 the ceramic trends split in two directions, one influencing the later historic Petun and the other influencing the historic Huron. Examination of Table 3 reveals that CRS could support this theory. The strong connections with McKenzie indicates a northward movement of the ceramic trends by CRS times. The fact that the CRS site and Sidey-MacKay site appear so similar is an indication of either their contemporaneity and/or a recent and common ancestral linkage. The Sidey-MacKay site's and the CRS site's greater similarity with the McKenzie site than with each other support the idea of both being influenced by a common ancestor.

The position of Copeland will only add to the evidence supporting a northward movement of pottery styles and possible population movements producing these changes. As stated earlier the Copeland site can be considered a Northern Division site. The CRS site and the Copeland site are so close geographically that one would expect a certain amount of stability of ceramic practices to exist even though outside influences were moving in. If the Copeland site were in existence before major Southern influences were being felt, and if CRS were in existence after the influx of Southern traits, then it would explain the high similarity between CRS and McKenzie and also the lack of a high similarity between Copeland and McKenzie.

CERAMIC PIPE ANALYSIS

A total of 377 pipe fragments were found in the excavated areas of the CRS site. Of these, 135 were pipe bowls (partial to complete). Ninety-six were complete enough to permit typing. Also included were 79 pipe stem fragments with the mouthpiece intact, 89 pipe stem fragments with neither the mouthpiece or elbow end, and 38 elbow fragments.

Color of the CRS pipes ranges from a brownish-orange to coal black. The pipes are well made, either untempered or finely tempered, and fired much harder than the ceramic vessels. It is significant to note that two pipe stems show signs of decoration. The rest are plain.

Of the 80 mouthpieces found at the CRS site, 41 were of the tapered form variety, 33 were of the ground variety, 5 were apparently part of longer stems but had been broken and the existing end ground flat, and one was of the bulbous form variety (Emerson, 1967:184).

A typological study of the ceramic pipes was undertaken in order to compare the CRS site to other Ontario Iroquois sites. This study will again follow the studies done by Emerson (1967). In the analysis of the Payne site, Emerson has attempted to define different pipe types. Unfortunately he gives the reader no other information to base the type on other than a sketchy drawing of the pipe type. By comparison of the pipe types

found at the Copeland site (Channen and Clark, 1965), from the Sidey-MacKay site (Witemberg, 1946) and those identified in Wright's "The Ontario Iroquois Tradition" (1966), it is possible to get an overall impression of how the types were defined.

Table 4 gives the frequency and percentage of the pipe types present at the CRS site. As was done with the ceramic vessel types, a comparison between sites utilizing the coefficient of similarity has been accomplished. Consistency is maintained in this type study by following as closely as possible the pipe types of Emerson (1967).

TABLE 4
PERCENTAGE DISTRIBUTION OF PIPE TYPES
AT CRS

Type	f	%
Iroquois Ring	28	29.1
Collared Ring	16	16.7
Elongated Ring	15	15.6
Ring Trumpet	5	5.2
Apple Bowl	4	4.2
Plain Trumpet	4	4.2
Miniature Trumpet	4	4.2
Bird Effigy	4	4.2
Decorated Vasiform	3	3.1
Conical Ring	3	3.1
Plain Bulbous	1	1.0
Conical Plain	1	1.0
Tapered Trumpet	1	1.0
Collared Plain	1	1.0
Human Effigy	1	1.0
Coronet	1	1.0
Plain Vasiform	1	1.0
Decorated Barrel	1	1.0
Decorated Collared	1	1.0
Rectanguloid Decorated	1	1.0
Total	96	99.6

Emerson has calculated the coefficients of similarity between the Bosomworth, Payne, Black Creek, Downsview, McKenzie, and Benson sites. The addition of the CRS site and the Copeland site should allow more interpretative statements to be made about the CRS site. To incorporate the Copeland site it was necessary to interpret the Ring Barrel Pipe type as the Elongated Ring pipe type. Comparison of the Ring Barrel type found on page 27 of the Copeland site report (Channen and Clark, 1965) and the Elongated Ring type found on page 191 of "The Ontario Iroquois Tradition" (Wright, 1966) shows that the two apparently different types are in reality the same type.

Using Table 5, the coefficients of similarity were calculated for the ceramic pipe types. Table 6 gives the coefficients of similarity between all of the sites in this analysis.

TABLE 5
PERCENTAGE DISTRIBUTIONS OF CERAMIC PIPES

Type	s E	Benson %	Mc- Kenzie %	Bosom- worth %	CRS %	Cope- land %	Black Creek %	Downs- view %	Payne %
Lizard Effigy									1.8
Corn Cob Effigy									1.8
Plain Bulbous					1.0				1.8
Decorated Bulbous									1.8
Conical Decorated									1.8
Aberrant									1.8
Tapered Trumpet					1.0				3.5
Collared Plain					1.0				5.2
Punctated Bulbous									8.6
Plain Tubular				7.7					
Punctated				15.4				2.0	
Decorated Vasiform				7.7	3.1	.6	3.2		1.8
Ring Trumpet				7.7	5.2	1.1		5.5	3.5
Iroquois Ring				7.7	29.1	48.9	12.7	7.3	5.2
Elongated Ring				23.1	15.6	19.1	23.2	25.2	3.5
Conical Ring		14.5	13.1	15.4	3.1	6.2	5.3	10.9	10.3
Apple Bowl		5.0	10.5	15.4	4.2		2.2	7.3	
Collared Ring		2.6	7.9		16.7	.6	2.2	3.8	5.2
Plain Trumpet		9.7	21.1		4.2	15.2	33.8	20.0	29.0
Miniature Trumpet			2.6		4.2		15.9	15.3	1.8
Human Effigy		7.3			1.0		1.1	2.0	3.5
Mortice		33.3	15.8						
Coronet		24.0	23.7		1.0				
Bird Effigy			5.2		4.2	1.1			
Snake Effigy		2.6							
Plain Vasiform					1.0				
Decorated Barrel					1.0				
Decorated Collared					1.0				
Rectanguloid Decorated					1.0	202			
Plain Barrel						1.1			
Bulbous Ring						.6			
Conical Plain					1.0	2.7			6.9
Total		99.0	99.9	100.1	99.6	100.1	99.6	99.3	98.0

It can be seen that the highest degree of similarity with the CRS site is the Copeland site. The next highest degree is shared with the Black Creek and Downsview sites. The high similarity with the Copeland site would indicate that the CRS site could very possibly date during the prehistoric period of the Late Ontario Iroquois stage. The ceramic vessel analysis and the dating of the Copeland site suggested by Wright (1966) places the Copeland site into the last half of the Northern Division of the Late Ontario

Iroquois stage (A.D. 1500). The fact that CRS appears to also have about 50 percent similarity with the Downsview and Black Creek sites (Late Southern Division sites of the Huron-Petun Branch) could further substantiate the claim that CRS is a Northern Division site dating near fusion times.

TABLE 6
COEFFICIENTS OF SIMILARITY BASED UPON PIPE TYPES

	Benson	Mc-Kenzie	Bosomworth	CRS	Copeland	Black Creek	Payne	Downsview
Benson	X	141	40	34	34	43	55	63
McKenzie	141	X	48	55	46	68	79	90
Bosomworth	40	48	X	78	70	84	50	113
CRS	34	55	78	X	116	98	69	98
Copeland	34	46	70	116	X	108	73	100
Black Creek	43	68	84	98	108	X	102	155
Payne	55	79	50	69	73	102	X	102
Downsview	63	90	113	98	100	155	102	X

As already noted, materially there is little difference between Northern and Southern Division sites of the Huron-Petun Branch. For pipes, the only difference is the occurrence of coronet and mortice pipes on late Southern Division sites (Wright, 1966). The Northern Division sites have no coronet pipes and effigy pipes are rare (Wright, 1966, p. 74). The presence of the coronet pipe on the CRS site (one specimen) and the finding of five effigy pipes leads one to suspect that the CRS site may be a fusion site. Wright states that by about A.D. 1550 "the northward shift of the Southern Division resulted in a gradual blending of the two divisions" (1966:66).

PROBLEMS TO BE CONSIDERED

If the CRS is a Northern Division site or early Fusion site, then one would expect that CRS would share a high degree of similarity with the MacKenzie site in the pipe analysis as was found in the vessel analysis. The fact that CRS does not have a high coefficient of similarity with the McKenzie site raises many questions. One problem may be that the sample sizes from the different sites are statistically too small for valid results. Unfortunately there is little that the archaeologists can do to increase the sample size.

The fact that pipe studies have produced such vague definitions of pipe types may be affecting what the analysis is trying to test. Consistent and exact definitions of pipe types must be formulated in order for the coefficients of similarity tests to be valid.

A final explanation for the differences between the outcomes of the vessel and pipe analysis is the question of exactly what it is that is being compared. The possibility that comparisons between pipe assemblages will indicate certain relationships not indicated by comparing vessel assemblages and vice-versa is always present. Since pottery vessels and pipes are expressions of two very different activities, the cultural ties underlying these remaining expressions may very well have separate rates of change. If it is true that different rates of change are present for different categories of cultural material, then comparisons between sites within specific cultural elements may only be valid if the investigator is aware of the comparative value for the particular element.

CONCLUSIONS

The results of the above studies on ceramic vessels and pipes suggest that ceramic vessels are quite sensitive to outside cultural influences. It is the opinion of the author that the chronological placement of the CRS site utilizing the coefficients of similarity for vessel types is valid. Caution must be employed, however, when trying to use pipes recovered for the same purposes.

The coefficient of similarity analysis of the ceramics recovered from the CRS site suggests a late prehistoric temporal position for the site falling between the Copeland site (*circa* A.D. 1500), and before the early protohistoric period (*circa* A.D. 1580). The absence of early historic materials at CRS is notable. Additional evidences suggesting a date in the last half of the 16th century include the recovery of a coronet pipe, a decorated bulbous pipe stem, four bird and one human effigy pipes, toggle deer phalanges, and a number of grooved and turret castellations, all of which are considered to occur in Huronia during and after fusion times (Wright, 1966; Emerson, 1967).

Since the CRS site appears to be a late prehistoric ancestor of the historic Huron, the controlled excavation of the entire village should allow for detailed distribution studies to detect the subsystems within this society. The utilization of space within the village compound is known for the historic Huron. The division of labor has also been recorded. It would be well worth the time to discover if these types of subsystems can be determined from a buried, undisturbed village. Should the excavation of the village portion of the CRS site be attempted, it is the author's hope that such problems will be considered. The chronological position of the CRS site has been determined. It would now be fruitful to examine the potential of the site for studying cultural processes.

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