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**BURIAL PATTERNS AT THE BALL SITE****Dean Knight and Jerry Melbye***ABSTRACT*

The archaeological context of six burials from the Ball Site, a Late Ontario Iroquois site, is described, and the physical anthropological data are integrated. Ethnohistoric and archaeological data are reviewed to present two hypotheses regarding mortuary customs surrounding sub-floor interments in the protohistoric period.

*INTRODUCTION*

The most famous and widely known burial practice of the historic Huron is the ossuary or mass interment of individuals during the Feast of the Dead (Trigger 1969; Tooker 1964). While this practice was undoubtedly one of the more spectacular means of depositing the dead, recent archaeological work on Huron sites has turned up much new data concerning primary interment of individuals (Kapches 1976; Williamson 1978). Unfortunately, the ethnohistoric literature presents relatively little information concerning these mortuary customs. It is the purpose of this paper to (1) present a brief review of non-ossuary burial practices, (2) present newly excavated data from the Ball Site (BdGv-3) including both archaeological and osteological data, and (3) explain these observations with the presentation of further hypotheses.

*ETHNOGRAPHIC DATA*

Heidenreich (1971) and others have pointed out that the *Jesuit Relations* indicate that care for the dead was highly developed among the Hurons with a special area (a cemetery) set up a short distance from the village. This area was held in deep respect and, if a fire broke out in the village and threatened the graveyard, the graves were protected before the village (Trigger 1969).

The Huron believed that they had two souls. One remained with the body after the Feast of the Dead and did not leave unless it was reborn as a child. The other soul left the body at the Feast and travelled to a village of the dead located in the west (Trigger 1969:103). The journey to this village was difficult so that the souls of old people and children remained in Huronia where they had their own villages (Trigger 1969, 1976). The body of a young baby, less than a month or two old, was buried under a path in order that its soul might enter the womb of a passing women and be reborn.

People who died violent deaths and from suicides were excluded from the ordinary village of the dead (Trigger 1969, 1976). If a Huron died outside of Huronia, the body was burned and the bones returned to the native village.

As soon as a man died, his body was flexed in a crouching position, wrapped tightly in his finest robe and laid on the mat on which he had died (Trigger 1969:105). Burial usually took place on the third day after the death. The body was carried to the cemetery where a tomb had been prepared which consisted of a bark coffin supported by four posts 8-10 feet in height (Trigger 1969:106). "In some villages a few corpses were buried in the ground, a bark hut or shrine was built over the grave, and a stake fence was erected to keep out dogs and wild

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animals. No reason is given for constructing the latter tombs, but they may have been erected over the bodies of those who died violent deaths" (Trigger 1969:106).

There are three primary accounts of the Feast of the Dead and the subsequent ossuary burial by the Hurons (Champlain 1615; Segard 1624; and Brebeuf in volume 10 of Thwaites 1896-1901). These accounts have been described and elaborated by others (Kidd 1953; Tooker 1964; Trigger 1969, et al). It appears that the practice of ossuary burial with large numbers of individuals is a late proto-historic to early historic development (Trigger 1976; Heidenreich 1971). This was the Huron's most important ceremony which took place approximately every 10 years. It was at this Feast that the Hurons exhumed all the bodies of those that had died since the previous Feast of the Dead and reburied the remains in a common pit (Tooker 1964). Other details of the ceremony need not be discussed here; however, it is relevant to point out that not *all* individuals were reburied in the ossuary (e.g. some would be "lost" for a variety of reasons and some would be excluded by proscription).

There is no question that the Hurons were greatly concerned with the deposition of the dead both individually and collectively. However, it is of some interest to note that neither the *Jesuit Relations* nor other ethnohistoric writers mention burials within houses as one of the methods used by the Huron to deal with their dead. Heidenreich (1971:151) notes that single burials are quite common in central and eastern Huronia but generally absent in the west. Presumably, he is referring to cemetery burials rather than burials within houses. As well, it is important to note that the flexed position is mentioned as preferred for primary burial in the cemetery.

### THE SITE

The Ball site (BdGv-3) is located overlooking the Mt. St. Louis Side Road in the Township of Medonte, Simcoe County (Knight 1978). This location is approximately 2.5 km from the present-day village of Warminster, Ontario and about 1.5 km from the site identified as Cahiaque (Fig. 1).

The Ball site covers between 9-10 acres. The soil is primarily sandy although there are clay patches scattered throughout. To date all or part of 44 longhouses have been excavated. The village is completely surrounded by a palisade composed of between 2 and 5 rows of posts (Fig. 2). The excavation to the end of the 1982 season would appear to encompass approximately half the site. Testing has confirmed the position of the palisade around the entire village.

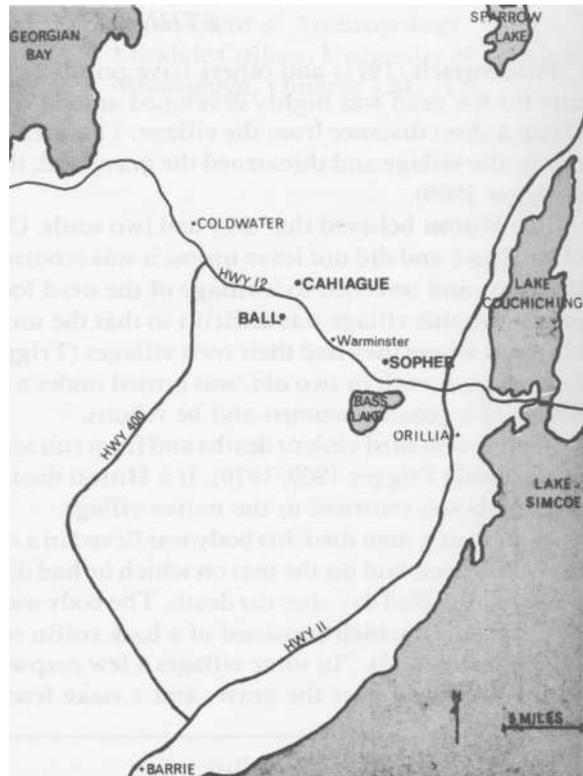
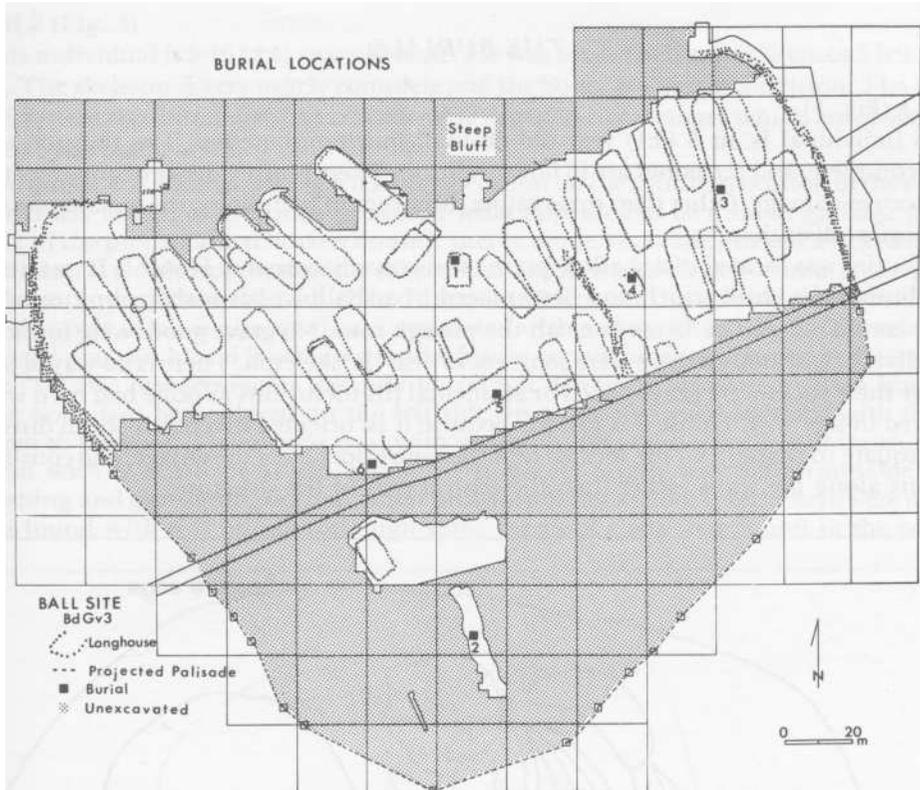


Fig. 1. The Ball site location in Simcoe County, Ontario.



The Ball site showing location of the burials.

Excavations to date have produced six burials, at least five from within houses (Table 1). The one exception (Burial 2) was found during testing operations which did not allow for expansion beyond the test area. It is probable that this burial was within a house, but confirmation will have to await further excavation. No instance of multiple burial within one house has been discovered so far. All came from pits beneath the floor of the structure. One burial (Burial 6) contained some small shell beads while the other five had no grave goods. It may be important to point out here that all the burials come from houses that are in some way unique from the majority of the other houses on the site.

**TABLE 1**  
**A SUMMARY OF THE BURIALS AT THE BALL SITE**  
 ( ) = months, - = indeterminate, ? = unknown at present

Burial #	House #	Age	Sex	Stature	Unique House Features	Other
1	5	8±1	—	—	orientation small surrounded by open area	possible abscess
2	?	46±4	M	5'9"	?	traumatic arthritis
3	20	11±1	—	—	longest on site	spinal tuberculosis
4	30	24±3	F	5'2"	smallest on site surrounded by open area	extremely short stature burning vertebral osteomyelitis
5	36	32±4	M	6'0"	orientation	extremely tall stature
6	15	(8)±(1)	—	—	on a slope	three shell beads

### THE BURIALS

#### *Burial 1* (Fig. 3)

This individual is an 8 ( $\pm 1$ ) year old child of indeterminate sex. The skeleton is very nearly complete, and the bones are in fair condition. There is no evidence of ante-mortem or post-mortem damage. Other than some rather minor tooth pathology, the remains are free of pathological disturbances.

The burial was located in a shallow pit in the northwest corner of House 5. It was a tightly flexed burial of a child which had been placed in a shallow, basin-shaped pit measuring 50 x 30 cms at a depth of 39 cm beneath the plough zone. No grave goods were found with this individual, although there were some rocks near the skeleton. There is no way of telling whether these rocks were grave goods or accidental fill inclusions as none had been worked or altered in any way. House 5 is unique because it is: oriented in a north-south direction; nearly square in shape (9 x 7 m); located near the centre portion of the village; and constructed with pits along the walls rather than the central part of the structure.

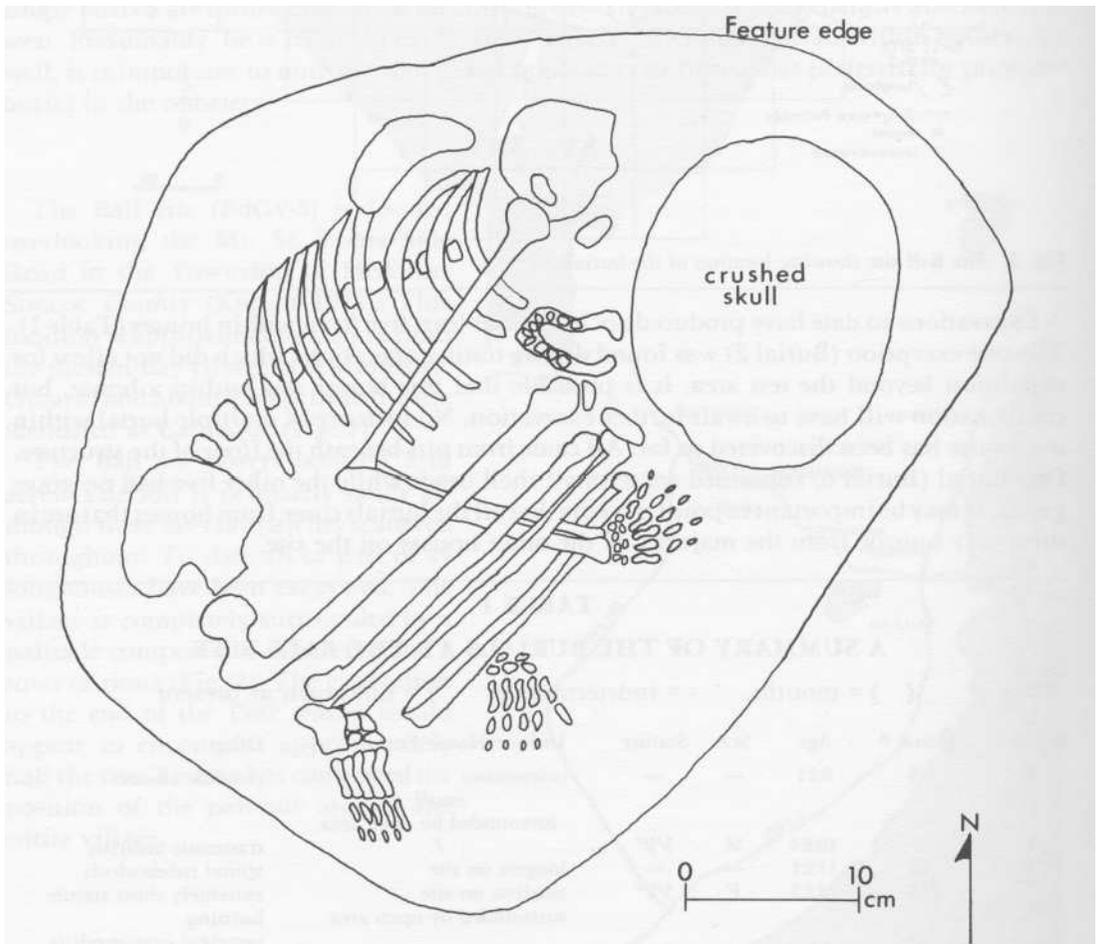


Fig. 3. Burial 1.

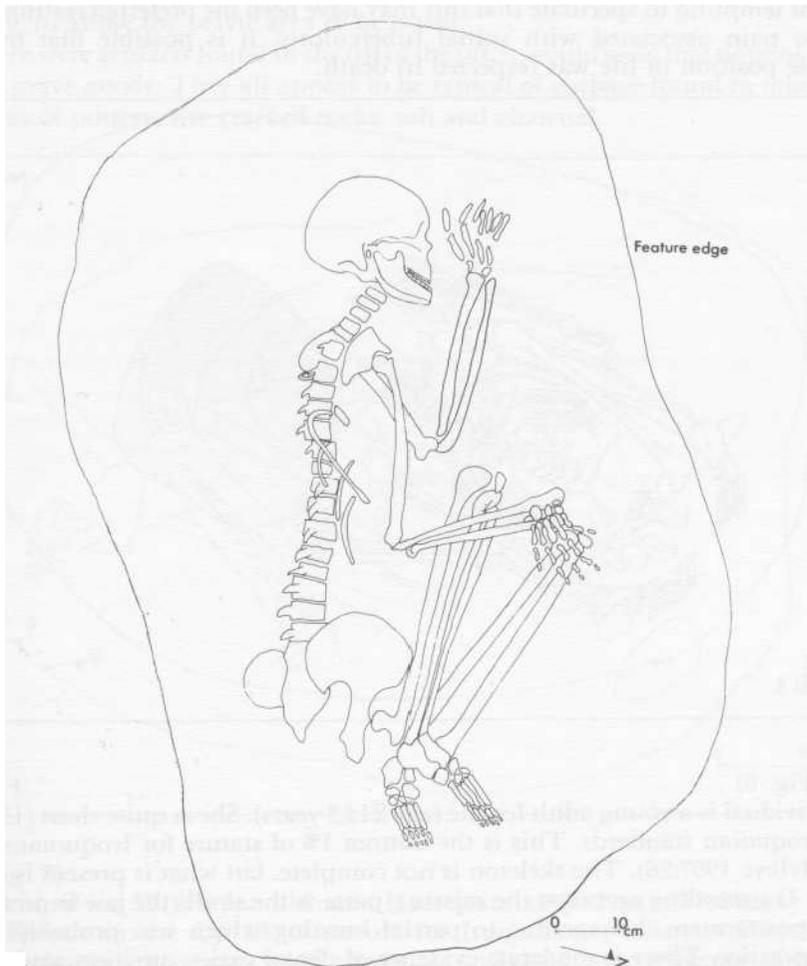
*Burial 2* (Fig. 4)

This individual is a 46 ( $\pm 4$ ) year old male. He was moderately tall (175 cm or 5 ft 9 in) for a male. The skeleton is very nearly complete and the bones are in fair condition. The left side of the vertebral column displays considerable degenerative changes which are probably the result of traumatic arthritis.

The burial was located during a testing operation on the southern portion of the site. The original test trench excavations produced what appeared to be a small garbage pit. The matrix of the pit contained broken ceramic pieces, stone, charcoal, ash and a flexed burial at the bottom. It would appear that the original burial pit was covered over and, subsequently, a garbage pit was established which had a much smaller area than the original burial pit. As well, this type of pit is almost always associated with areas within houses. Therefore, it is suspected that this burial is within a house; future excavations will be required to prove the point. To date this represents the only burial not definitely associated with a house.

The body had been placed on the left side (in a loosely flexed fashion) with the head directed to the west. The pit was oval with straight sides and flat bottom. It measured 81 x 105 cm with a depth of 41 cm below the floor. Its origin was indeterminable due to ploughing and garbage deposition, but it probably began at floor level. There were no grave goods found with this burial, although some pieces of chert were found in the pit fill.

Fig. 4. Burial 2.



*Burial 3* (Fig. 5)

This individual is an 11 ( $\pm 1$ ) year old child of indeterminate sex. The skeleton is very nearly complete, and the bones are in excellent condition. There is no evidence of ante-mortem or post-mortem damage. Other than some rather minor tooth pathology all the remains are pathology free except the vertebral column. There is rather strong evidence that this child died of spinal tuberculosis.

The burial was located in the west central portion of House 20, the longest house on the site. The burial pit was 123 x 71 cm, and the long axis was roughly parallel to the west side of the house. Its depth beneath the plough zone was 25 cm. The child was found in the north portion of this pit. The body positioning is rather unique. It was placed in the prone position with the face turned to the west. The legs had been drawn up so that the knees were very near the shoulders, and the feet were near the hip joint. The arms were bent at the elbow with the lower arm and hands near the face and back of the skull. The authors are not aware of any similar burial within Huronia. Kapches (1976:33) reports a personal communication from Wright that a similar burial position was found at the Roebuck site. There, a young child (14-17 months) had been placed flexed, face down in an ovate pit below the floor of a longhouse. It is interesting to note at the Ball site that the burial pit was large enough to place this individual in a flexed position and only occupy the northern part of the pit. No grave goods were found with this burial.

It is most tempting to speculate that this may have been the preferred resting position in life due to pain associated with spinal tuberculosis. It is possible that this singular comfortable position in life was respected in death.

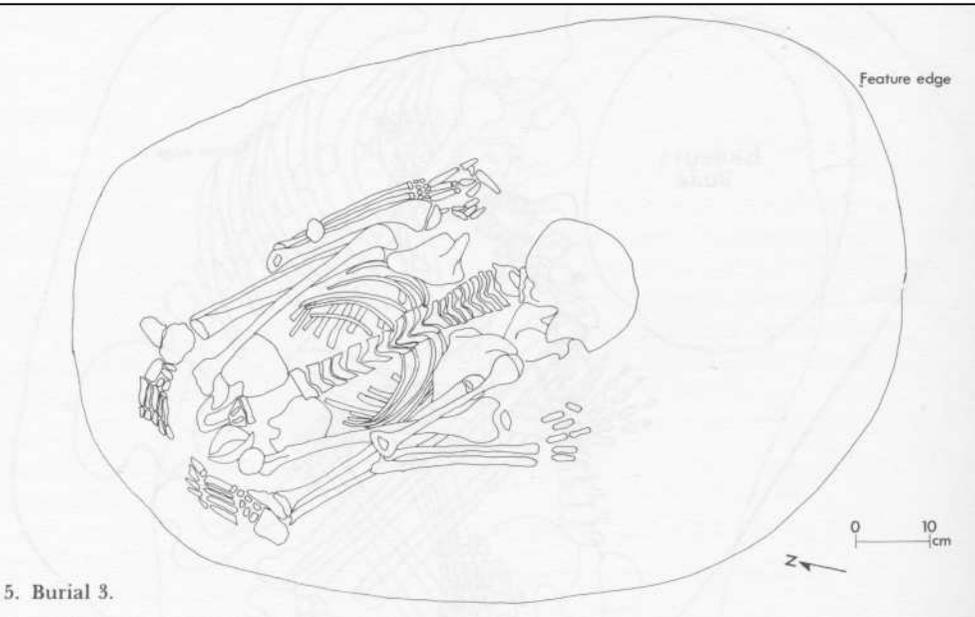


Fig. 5. Burial 3.

*Burial 4* (Fig. 6)

The individual is a young adult female (age  $24 \pm 3$  years). She is quite short (158 cm or 5 ft 2 in) by Iroquoian standards. This is the bottom 1% of stature for Iroquoians (Anderson 1964:36; Melbye 1967:26). The skeleton is not complete, but what is present is in excellent condition. Outstanding amongst the missing parts is the skull (the jaw is present). There has been postmortem damage due to partial burning which was probably part of the mortuary practice. There is moderate evidence of dental caries, attrition, and periodontal

infection. The only bone pathology involves the lower back which probably was a general infection of the vertebral bodies (osteomyelitis) which further resulted in bony growths (osteophytosis) around the vertebral bodies. It remains speculative whether this infection caused death.

The burial was located in the northeast part of House 30, the smallest house on the site. Initially, the feature containing the burial was thought to be a garbage pit due to the ash, stone and broken pottery fragments found in the fill. These did not seem to be grave goods. The pit containing the body was 69 x 98 cm and the bottom was 20 cm deep. It was roughly oval in outline.

The burial had been badly disturbed. In addition to the missing skull the mandible had been disturbed in the grave. As well, some of the ribs were no longer present. Originally, the burial had been placed on the west side of the pit in a loosely flexed position on its left side. The left arm and hands had probably been placed near the skull. It would appear that the disturbance took place after the body had been interred. The pelvis, proximal portion of the femur and the lower vertebrae had been burned, and it appears that the burning took place in situ. The absence of the skull possibly suggests some mutilation; however, the cervical vertebrae are present suggesting that the head had not been decapitated. It may have been removed after the body had decayed sufficiently to easily sever the muscles and tendons attaching it to the spinal column. The body must have been left exposed in the pit at least for a short while to allow the pelvic area to be burnt.

While there were artifacts found in the fill of the pit, it would seem that none of these were designed as grave goods. They all appear to be typical of garbage found in other pits, i.e. broken pieces of pottery, fire cracked rocks, ash and charcoal.

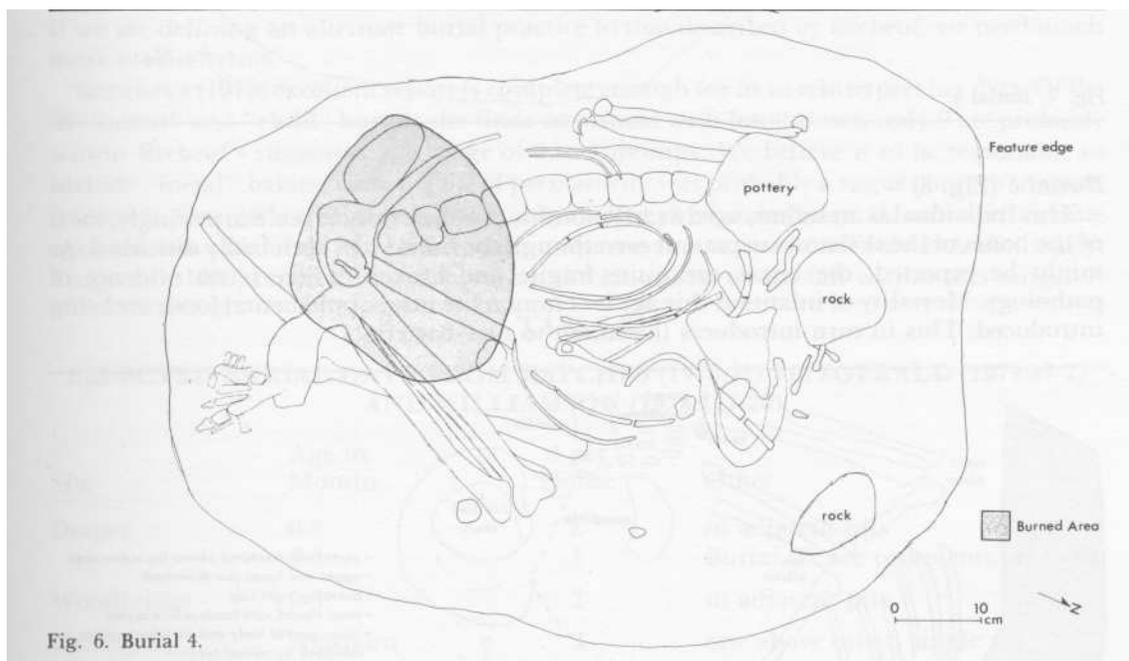


Fig. 6. Burial 4.

#### *Burial 5 (Fig. 7)*

This individual is a 32 ( $\pm 4$ ) year old male. He is quite tall (182 cm or 6 ft 0 in) by Iroquoian standards. This is in the top 1% of stature for Iroquoians (Anderson 1964:36; Melbye 1967:26). The bones are in very good condition and there is no evidence of burning or

postmortem alteration. The entire skeleton is pathology free except for moderate osteoarthritis of most of the joints.

The burial was located in the south central part of House 36. The pit used for the burial was rather large (196 x 102 cm) and roughly oval with straight sides. The bottom was slightly deeper (by 20 cm) on the southwest side of the pit and this was the area used for the burial. The entire depth of the pit was 50 cm below the surface. The upper level of the pit was used for garbage with pottery, animal bones, chert flakes and fire-cracked rock in the fill. None of these appear to be grave goods. The burial had been placed in a loosely flexed position on the left side with the head toward the west. The right hand was placed in front of the face, while the left hand was beneath the skull near the external auditory meatus.

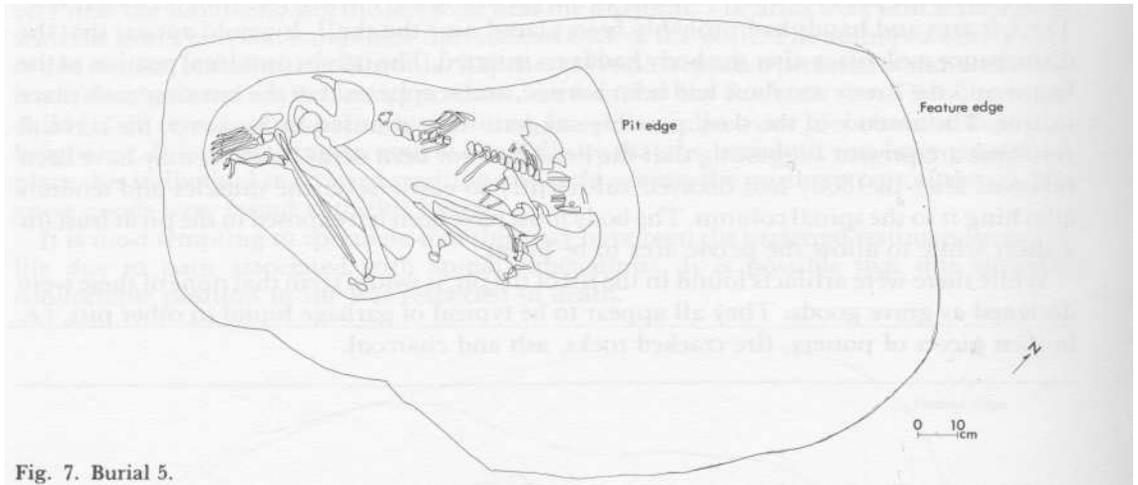


Fig. 7. Burial 5.

#### Burial 6 (Fig. 8)

This individual is an infant, aged 8 ( $\pm 1$ ) months, of indeterminate sex. Surprisingly, most of the bones of the skeleton are present even though the burial had been badly disturbed. As might be expected, the bones are quite fragile and broken. There is no evidence of pathology. Mortality of infants at this age is common because supplemental foods are being introduced. This in turn introduces the infant to new bacteria.

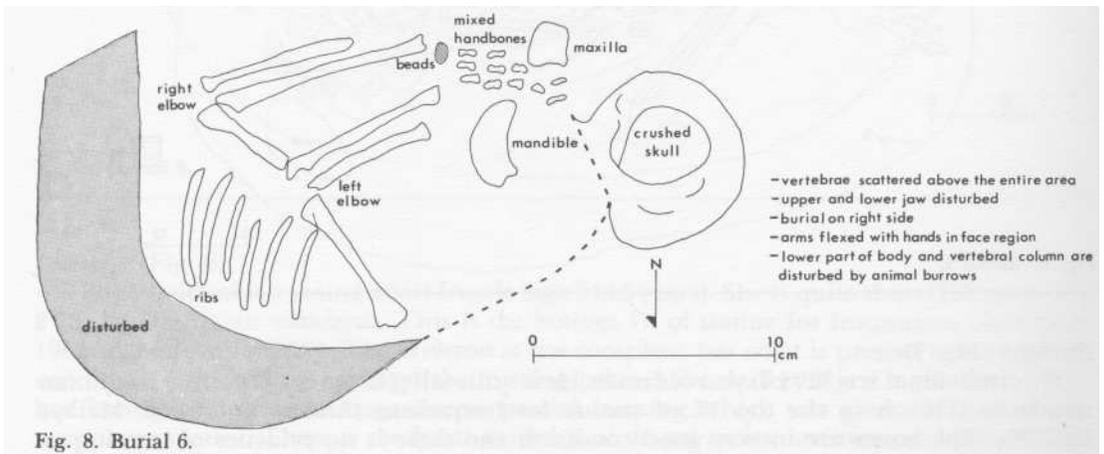


Fig. 8. Burial 6.

The burial was found within Feature 6 of House 15. This feature was composed of three distinct pits — all appear to be garbage pits including the one containing Burial 6. The pit and contents appeared to have been greatly disturbed by rodent activity. Two rocks were on top of the burial which was in the southeast portion of the pit.

It was immediately apparent that this burial was a very young infant. Very little of the burial pattern remained due to natural erosion and rodent activity. The burial contained three shell beads near the wrist. These may be personal ornaments rather than specific grave goods. The right forearm (radius and ulna) were articulated but very little else. The maxilla was located 10 cm southeast of the skull.

### DISCUSSION

Data from the Ball site are at variance with the pattern suggested by Kapches (1976). At Ball, we have an infant, a child, an adolescent, a young adult, a middle aged adult, and an old adult. Such a complete cross-section of a population from six burials is a most fortuitous situation. Is it chance, or is it significant to mortuary customs? We may never know.

Kapches (1976) has pointed out the presence and frequency of known infant burials within houses for the Ontario Iroquois. She indicates that usually no grave goods are present in these burials and that there does not seem to be any special placement of the burials within the houses. She views this type of burial as "an alternative burial practice from that of the interment of infants on the periphery of the village as described by Brebeuf" (Kapches 1976:37). However, we note that the quote by Brebeuf (Thwaites 1896-1901, vol. 10:273) refers specifically to the burial of infants less than two months old who are buried by paths. Her data include many infants and children older than this. Kapches (1976) defines "infant" as anyone aged 0 to 2, while most demographers define an infant between the ages of 0 and 1. Others, we fear, use infant rather loosely to mean very young children. Obviously, if we are defining an alternate burial practice to that described by Brebeuf, we need much more precise terms.

Kapches's (1976) excellent report is complete enough for us to reinterpret her data. Of the 20 "infant" and "child" burials she finds associated with longhouses, only 9 are probably within Brebeuf's suggested age range of 0 to 3 months. We believe it to be reasonable to include "foetal" babies, since degree of prematurity was probably a vague concept (no pun intended). Even today, degree of prematurity is often an educated guess. At any rate, her nine aged infants which fall within Brebeuf's range are summarized on Table 2. Additionally, Fitzgerald (1979) reports five infants from the Hood site which fall within this range.

**TABLE 2**  
**SELECTED BURIAL DATA FROM KAPCHES (1976:31) FITZGERALD (1979:51-2)**  
**AND WILLIAMSON (1978:117-20).**

Site	Age in Months	# per House	Other
Draper	0-6	2	in adjacent pits
	0-3	1	Burial #8, see comments on p. 46.
Woodbridge	0-3	2	in adjacent pits
Cahiague	Newborn	2	one above other, single pit
Steward	Foetal (2)	3	one above other in one pit
	Newborn (1)		and one in adjacent pit
Hood	0-3	2	non-adjacent pits
	0-1	2	adjacent pits
	Newborn	1	"storage space"

We think it is more than coincidence that in almost every case where the age range is appropriate, there are two individuals of nearly the same age (twins?) in closely associated pits in the same house. The Steward site is an exception (triplets?) which follows the rule. The newborn from the Hood site is an apparent exception. However, it is in a unique "corner" of a house and, perhaps, should not be classified as a longhouse burial. Burial 8 at Draper Site is an exception (Williamson 1978) since three individuals (two non-infants) are in one house. We have no explanation, but we notice the house appears to have been modified a number of times. There are two important points to emphasize. First and most important, twins do not always die simultaneously, yet here they all seem to have done so among these subfloor burials. Is it infanticide? Is it chance? We will probably never know. We think Kapches's suggestion (1976:35) is a good one, that is, the significance of the practice is probably related to the creation myth which commences with the birth of twins. But why in pairs in associated pits? Secondly, infants (0-3 months) are also occasionally found in ossuaries. Therefore, there must be alternative burial practices to that described by Brebeuf.

We believe two things are happening which are obscuring Kapches's data. First, Kapches is absolutely correct in defining an alternate burial practice to that described by Brebeuf. However, we would define it more precisely:

*Newborn babies who die during their first three months of life are buried along paths so that their soul may enter the womb of a passing woman (Brebeuf in Thwaites 1896-1901, vol. 10:273). Occasionally, these babies are re-interred in an ossuary during the Feast of the Dead ceremony. However, twins are buried under the floors of houses — perhaps in a special ceremony related to the twins in the creation myth (Kapches 1976:35) and perhaps in a ceremony involving infanticide.*

Second, there is another mortuary custom which explains the remainder of Kapches's and Fitzgerald's data as well as ours. Kapches (1976) considers the number of adults buried under house floors (10) to be insignificant when compared to infants and children (20). However, she defines "child" as anyone older than 2 and less than adult. Of her 20 "infants and children" nine are involved in the previously defined mortuary custom. Of the remaining 11, seven are "children" (i.e. subadults) and four are "infant" (i.e. under age 2). In other words, in her survey of burials under house floors she has found 10 adults, 7 subadults and 4 young children (under age 2). In the absence of more exact aging it is difficult to be certain, but it appears that there may be a general cross-section of all ages. Also, with only minor exceptions, it appears they are all isolated burials in pits under house floors — usually one to a house. Fitzgerald (1979) has an old person (age 65) and a child (age 6) which appear to be random ages from a population. It is possible that the isolated newborn could be part of this random age pattern.

This corresponds (roughly) to the situation at the Ball site. We found no special age group but, rather, a cross section of all ages. We found only one burial to a house. In the excavations to date only 14% (6/44) of the houses have produced burials. Each of these houses has some unique features when compared with the other houses. These latter features cannot be compared with other sites because only the Ball site has been so completely excavated.

One further observation seems pertinent. The Ball site is quite large for a Late Ontario Iroquois village. Heidenreich (1971:129) presents convincing evidence that the optimum population size was between 1,000 and 1,200 individuals on sites ranging from five to six acres. Few sites exceed six acres, but the Ball site is one of them (nine to ten acres). If we consider Heidenreich's figures in general terms, we can estimate about 200 individuals per acre of village. A very rough estimate of the population at Ball would be between 1,800 to 2,000 individuals.

If the Crude Death Rate is similar to the Fairty site, an estimate of 0.0418 (Melbye 1981) is

not unreasonable. That means that the people of the Ball site would be experiencing about 80 ( $\pm 4$ ) deaths per year. If the average life of a Huron village is about ten years, that would produce about 800 dead. Six burials have been discovered so far, and about half the village has been excavated. Twelve burials would be expected by the end of the excavation. Therefore, it is roughly estimated that this mortuary custom is employed about 2% (12/800) of the time.

It has often been suggested that burial under a house floor might be an alternative to cemetery burial when the earth is frozen, the so-called "Spring Thaw Hypothesis" (Melbye 1969:38). However, if we minimally estimate the ground to be frozen only two months (a most conservative estimate), this would be 17% (2/12) of the time. Overall, we would expect a minimum of 136 (.17 x 800) people buried under house floors. Unless the custom included exhumation for spring cemetery burial or for the Feast of the Dead, this is not a viable hypothesis. The association of unique houses somewhat detracts from this hypothesis. At any rate, we prefer to keep this idea on hold for the time being. In the absence of any ethnohistoric or archaeological evidence, it remains as pure speculation. If we ignore speculation for the moment, we can define this second mortuary custom somewhat imprecisely on the basis of the foregoing data:

*In rare instances (2% of the time) dead individuals are selected for burial under house floors. The houses are not random, but seem to be selected for some special (unique?) features. Whatever the reason for selection, it does not appear to be related to either age or sex of the individual. The individuals often have unique biological features (extremely tall, extremely short, unusual pathology). The burials are usually flexed, single interments in subfloor pits. Houses rarely (14%) have burials; however, when they do, there is almost always only one burial per house. The burials do not occur in any particular part of the house, and have no apparent orientation.*

It is hoped that future investigators can synthesize their data and refine our definitions. We have chosen to ignore the problem of so called torture or war victims which is probably another important mortuary custom. Burial 4 may be assignable to this mortuary practice. We are particularly intrigued by the relationship between unique houses and unique biology. Unfortunately, the data are too thin to make definite assertions. It did not escape our notice, for example, that the smallest house on the site has an extremely short person buried in it. Such associations seem ludicrous to us. Unfortunately, comparisons with other sites are limited because villages are rarely excavated as extensively as the Ball site. Obviously, only comparative data from future excavations will draw out the vexing pattern that must be there.

#### ACKNOWLEDGEMENTS

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#### REFERENCES CITED

- Anderson, James  
1964 The People of Fairty: An Osteological Analysis of an Iroquois Ossuary.  
*National Museum of Canada Bulletin* 143:28-129.

- Champlain, S.  
1619 *Voyages et Descouvertes Faites en la Nouvelle France, depuis l'annee 1615 jusque a la fin de l'annee 1618.* Paris.
- Fitzgerald, William R.  
1979 The Hood Site: Longhouse Burials in an Historic Neutral Village. *Ontario Archaeology* 32:43-60.
- Heidenreich, Conrad  
1971 *Huronnia, A History and Geography of the Huron Indians 1600-1650.* McClelland and Stewart. Toronto.
- Kapches, Mima  
1976 The Interment of Infants of the Ontario Iroquois. *Ontario Archaeology* 27:29-39.
- Kidd, Kenneth E.  
1953 The Excavation and Historical Identification of a Huron Ossuary. *American Antiquity* 18(4):359-379.
- Knight, Dean  
1978 The Ball Site: A Preliminary Statement. *Ontario Archaeology* 29:53-63.
- Melbye, F. J.  
1967 An Analysis of the Infracranial Material from the Orchid Site. Unpublished MA thesis, Department of Anthropology, SUNY-Buffalo, Buffalo, New York.  
1969 An Analysis of a Late Woodland Population in the Upper Great Lakes. Unpublished PhD dissertation, Department of Anthropology, University of Toronto, Toronto, Ontario.  
1981 The Fairty Site Revisited. Paper presented to the annual meeting of Canadian Association for Physical Anthropology.
- Sagard, Fr. Gabriel  
1632 *Le Grand Voyage du Pays des Hurons.* Paris.
- Thwaites, Rubin Gold (editor)  
1896-1901 *Jesuit Relations and Allied Documents* (73 volumes). The Burrows Brothers Company. Cleveland.
- Tooker, Elizabeth  
1964 An Ethnography of the Huron Indians 1615-1649. *Bureau of American Ethnology Bulletin* 190.
- Trigger, Bruce G.  
1969 *The Huron: Farmers of the North.* Holt, Rinehart and Winston.  
1976 *The Children of Aataentsic* (2 volumes). McGill -Queen's University Press. Montreal.
- Williamson, Ron  
1978 Preliminary Report on Human Interment Patterns of the Draper Site. *Canadian Journal of Archaeology* 2:117-121.

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