

## HISTORIC NEUTRAL IROQUOIS FAUNAL UTILIZATION

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### ABSTRACT

Analysed faunal material from 6 historic Neutral Iroquois sites, spanning a period of approximately 100 years (AD 1540-1651), is synthesized for the first time. The results provide information not only about the dietary and hunting preferences of the Neutral Iroquois, but also about trade during the 16th and early 17th centuries and the distribution of local species. Faunal differences are also noted between town and village settlements. Furthermore, an artifact classification is offered for worked antler, bone, teeth and shell found on historic Neutral sites. Comparison of the historic Neutral fauna with that from contemporaneous Petun sites reveals significant differences, particularly with reference to the European demand for beaver fur.

### INTRODUCTION

During the early 17th century the country of the historic Neutral Iroquois was described by the French as being very beautiful, bountiful, and having a milder climate than that in Huronia (Daillon 1866: 806-807; JR 21:195). This observation stems from the fact that ecologically the Hamilton-Niagara homeland of the 16th and early 17th century Neutral Iroquois (Noble 1977) lay within the northern boundary of the Carolinian Biotic Zone (Cleland 1966; Noble 1975b). This distinctive zone (Fig. 1) is characterized by a flora that includes Chestnut (*Castanea dentata*), Shagbark Hickory (*Carya ovata*), Red Oak (*Quercus rubra*), White Oak (*Quercus alba*), Beech (*Fagus grandifolia*), and Tulip trees (*Liriodendron tulipifera*). It presents an environment rich in fauna, with habitats particularly suitable for Wild Turkeys (*Meleagris Gallopavo*), Passenger Pigeons (*Ectopistes migratorius*), Carolina Parakeets (*Conuropsis carolinensis*), Virginia Deer (*Odocoileus Virginianus*) and Grey Squirrels (*Sciurus carolinensis*). Two of these species are now extinct. The last Carolina Parakeet was seen in 1920, while the well known Passenger Pigeon has been extinct since 1914.

In historic Neutralia, the Niagara escarpment stands out as a distinctive relief feature, and provides an important directional flyway for migratory birds seeking thermal updrafts. The Niagara River marks the south end of the Niagara Peninsula between Great Lakes Erie and Ontario. Large swamps in the region (e.g. Beverly, Beaverdams, Wainfleet) clearly provided major yarding areas for Virginia deer and suitable habitats for wetland species. In contrast to the late prehistoric settlement patterning, Noble (1982) has noted that many historic Neutral Iroquois towns, villages and hamlets coalesced near the swamps in the Hamilton-Niagara region.

It is known both ethnohistorically (Daillon 1866: 806) and archaeologically (Noble 1978: 159) that the historic Neutral Iroquois were an agrarian people growing corn, beans, squash and tobacco; they also relied heavily on hunting, fishing and gathering for their sustenance

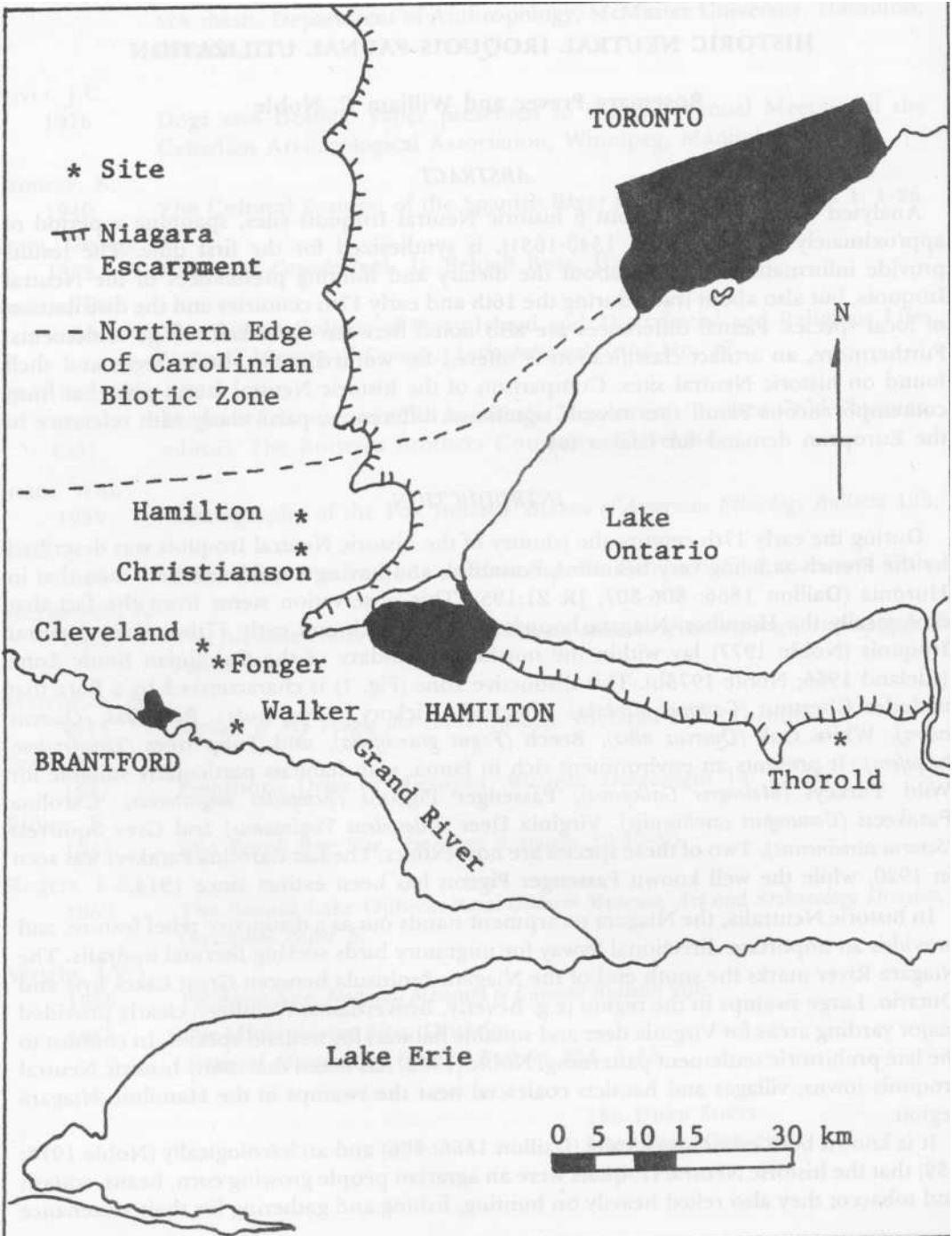


Fig. 1. Six Neutral Iroquois sites.

and for certain trade commodities. The historic Neutral's faunal utilization contributes knowledge about past zoology, dietary preferences, artifact manufacture, trade involvement and settlement patterning nuances. The ramifications of their low level of beaver hunting, but concentrated acquisition of European trade goods, creates an interesting enigma about the role they played in the early 17th century European fur trade.

The historic Neutrals occupied an important political and geographic position between two major trade networks (Noble 1978:160); one linked them northward to the Petun, Hurons, and the French, while the other joined them to Iroquoian allies in western New York and Pennsylvania down the Susquehanna River to salt water at Chesapeake Bay. The historic Neutrals had for exchange such natural products as rendered oil, squirrel pelts, and probably deer and pigeon meat, in addition to their tobacco and finished chert items (Noble 1978:160).

Beaver were abundant in historic Neutralia, but apparently little utilized by the Neutral Iroquois. Joseph de la Roche Daillon (1866:803) relates that during his 1626-27 visit among the Neutrals, the Algonkian chief Iroquet and twenty of his men, took a good 500 beaver. However, the following analyses indicate that Neutral beaver hunting remained virtually unchanged (circa 3%) from the late prehistoric until 1651, the terminal date of the Neutral dispersal as a cultural entity. Only one known historic Neutral site, the Christianson village, departs from this norm with a 19% incidence of beaver. (Prevec 1980).

Gabriel Sagard (1939:225) commented that deer were more plentiful in Neutralia than in Huronia, and Daillon's (1866:806) eyewitness account also records "an incredible number of deer" in the Neutral country. Thus, it comes as no surprise that Virginia Deer of all ages constitute the dominant species recovered from historic Neutral middens (Noble 1978:159). Daillon further recorded a great abundance of moose or elk, beaver, wild-cat (raccoon?), black squirrels, wild geese, turkeys, cranes and other animals in 1626-27, and that the rivers in Neutralia "furnished much excellent fish" (Daillon 1866:807).

In the following, faunal assemblages from 6 historic Neutral Iroquois sites have been selected for synthesis, comparison and interpretation. They constitute a sample of the historic sites investigated by McMaster University researchers over the past 14 years in the Hamilton-Niagara region (Fig. 1). The selected examples include analysed collections from the three large towns of Thorold, Walker and Hamilton, and from the three smaller villages of Cleveland, Fonger and Christianson. The excavators and faunal analysts for these sites are as follows: *Cleveland* (Noble 1927b; Marchand and Knutson 1972; Burns 1972; Prevec 1981); *Fonger* (Kenyon 1972; Warrick 1979, 1982; Prager 1980); *Christianson* (Noble 1970; Fitzgerald 1981; Prevec 1980); *Thorold* (Noble 1980; Langley and Smith 1980; Freer 1980a, 1980b); *Walker* (Noble 1974; Wright 1981; Rick and Cumbaa 1976; Silieff and Rick 1976); and *Hamilton* (Noble 1972a; Devereux and Ramsden 1974; Lennox 1981; Pihl 1977a, 1977b).

#### HISTORIC NEUTRAL IROQUOIS FAUNA

For the first time a synthesis can be presented for analysed faunal remains from historic Neutral Iroquois settlements. Table 1 indicates overall percentile distributions by class of elements identified to order or lower taxa. As expected, mammals dominate the inventory at all 6 sites and Virginia Deer normally represents the most significant mammal recovered. Other large-sized mammals are Black Bear (*Ursus americanus*) and Elk (*Cervus canadensis canadensis*), while the more medium-sized mammals include Raccoon (*Procyon lotor*), Beaver (*Castor canadensis*), *Canis* species and Woodchuck (*Marmota monax*). Grey Squirrel (*Sciurus carolinensis*), Red Squirrel (*Tamiasciurus hudsonicus*) and *Mustelidae* species are among the small sized mammals found at all sites.

**Table 1**  
**DISTRIBUTION OF IDENTIFIED SPECIES CLASS\***

Site	Cleveland ca. 1540	Fonger 1600-20	Christianson 1615-30	Thorold 1615-30	Walker 1620-45	Hamilton 1635-51
Class						
Mammalia	73.74	82.4	69.2	55.01	73.2	75.2
Osteichthyes	4.75	6.8	7.4	9.98	15.4	7.3
Aves	0.35	1.2	5.1	15.72	8.4	12.7
Pelecypoda and Gastropoda	20.08	8.8	14.4	12.96	1.5	3.2
Reptilia	0.71	0.7	1.7	6.00	0.6	0.9
Amphibia	0.35	0.1	2.1	0.33	0.9	0.7
Crustacea	0.02	-	0.1	-	-	tr
Total	100%	100%	100%	100%	100%	100%

\*Note: All extraneous European-derived species and marine shell have been deleted from these totals.

Fish and avian species are also important supplements to the historic Neutral Iroquois diet. Of the fish, coarse species such as Catfish (*Ictaluridae sp.*), Sucker (*Catostomidae sp.*) and Freshwater Drum (*Aplodinotus grunniens*) prove popular, while Wild Turkeys and the now extinct Passenger Pigeons are most common of the avifauna. Significantly the data from Table 1 indicates that fish and bird elements occur in higher proportions on the large town sites (2 - 6 hectares or 6 - 15 acres) than on the smaller village settlements (.4 - 2 hectares or 1 - 5 acres). The reasons for this occurrence are not understood at present, but this settlement size-faunal correlation should be noted.

**TABLE 2**  
**INTERSITE COMPARISON OF MAJOR IDENTIFIED SPECIES**  
**(percentage)**

	Cleveland Early Protohistoric ca. 1540 A.D.	Fonger Historic 1600-20 A.D.	Christianson Historic 1615-30 A.D.	Thorold Historic 1615-30 A.D.	Walker Historic 1620-45 A.D.	Hamilton Late Historic 1635-51 A.D.
Total Elements Identified Below Class	6056	1621	2042	2716	10,529	11,607
Species % of Its Identified Class						
White-tailed Deer	64.6	72.0	41.5	33.7	70.2	61.4
Raccoon	3.6	2.8	9.0	6.6	6.5	17.0
Beaver	3.0	6.9	19.0	0.7	3.6	3.0
Canis species	12.1	3.8	12.0	8.3	1.9	4.6
Grey Squirrel	0.8	1.1	0.9	33.5	10.3	8.0
Passenger Pigeon	0.0	15.8	60.0	86.2	84.9	63.5
Wild Turkey	57.0	10.5	2.8	5.9	3.9	7.7

Other significant details arise when major species within the faunal classes are identified and compared across the 6 historic Neutral sites. Readily apparent from Table 2 is the high incidence of Virginia deer on all 6 sites. This fact corroborates Daillons eye-witness observation of "an incredible number of deer" in Neutralia, and it also indicates that a substantial portion of the Neutral's high protein diet was derived from venison.

Raccoons normally make up a second favoured animal and they are found in larger numbers on the later sites, probably as a result of increased fur trade following contact with the French. At the early protohistoric Cleveland site (circa AD 1540) raccoon and beaver are present in small numbers, and whereas raccoon generally increases in frequency throughout the historic era, beaver only rise marginally to 6.9% at Fonger and reach a peak of 19.0% at Christianson. At none of the large town sites, including Walker, which Noble (1978:162) believes to be Souharissen's capital town of *Ounontisaston*, do beaver exceed the early protohistoric levels. This low proportion of beaver at most historic Neutral sites cannot be completely explained, but it may reflect differences in local availability of beaver at given sites or perhaps a difference in pelt processing locale between village and town settlements. Conceivably it may also be the result of differential attitudes by various Neutral tribes towards the French fur trade.

*Canis* species, including dogs, wolves and hybrids, are always found on historic Neutral Iroquois sites and can attain frequencies of 12% (Table 2). The presence of *Canis* bones, sometimes cut, charred or gnawed, indicates that at least some of them were used as a food source. At Cleveland three almost complete dog skeletons were found in midden contexts (Noble 1972b), including one severely diseased animal with the rare respiratory condition hypertrophic pulmonary osteopathy (Burns 1973). The historic Neutral dogs were about terrier size.

Grey squirrels, including the melanistic black phase, appear to have been in some demand after AD 1615 at the large town sites (Table 2). The black squirrel pelts were "very fine, and the Indians used them to make dresses" (Boucher 1883:39). Both Daillon (1866:806) and Boucher (1883:39) described the Black Squirrels as being quite large, and no doubt they were trapped during October and November when their skins would be in their glossiest condition. Aboriginal trade probably accounts for the relatively large representation of Grey Squirrel at the Thorold (33.5%) and Walker (10.3%) sites. Thorold, on the edge of the Niagara Escarpment in the lower Niagara Peninsula, was in a particularly suitable environment for squirrels. In 1792 at Niagara, large Black Squirrels were "found about this place in great plenty" (O'Leary 1912:44), and they were known to make mass emigrations when their populations became high (Burt and Grossenheider 1976:118). Even during the early 1800s, spectacular hordes were observed swimming the Niagara River in autumn (Banfield 1974:134).

Comparison of the avian bones from the 6 historic Neutral sites presents interesting patterns and problems, particularly for Passenger Pigeons and Wild Turkeys. As Table 2 indicates, pigeons and turkeys are important avifauna for the Neutral Iroquois, but the two are not always present at the same site (e.g. Cleveland). The evidence presented in Table 2 shows that the proportions of Passenger Pigeon elements increased dramatically after 1615, indeed so much so that one wonders whether or not this is solely in response to feeding the historic Neutral Iroquois population. Did pigeons become a trade commodity between 1615-1651? This cannot be ascertained at present, but it is clear that Passenger Pigeons were a distinct minority or altogether absent at the protohistoric sites of Cleveland and Fonger. On the other hand, Passenger Pigeons ranked third among the avifauna at the late prehistoric AD 1500 Lawson site farther to the west (Wintemberg 1939:9). Thus, incidences have fluctuated through time.

The low incidence of Passenger Pigeons at the geographically contiguous Cleveland and Fonger sites may relate to migratory and nesting patterns. McIlwraith (1894:182) noted the irregular migratory patterns of Passenger Pigeons and Greenway (1967:305-306) has documented the size of flocks as varying and not always being of enormous numbers. While their nesting colonies were known to reach 3 to 4 miles wide and 40 miles long (Greenway 1967:306), some of the pigeons also nested in small colonies and isolated pairs (Greenway 1967:305). Poor representation of Passenger Pigeons at some of the Neutral sites may reflect lack of large flocks or local nesting birds. Lack of suitable food (Halliday 1978:88) could also have been a factor. Thorold, which has the highest incidence of Passenger Pigeons (86.2%), lies on the Niagara escarpment flyway. The pigeons generally flew north in May and returned south in September (Boucher 1883:43).

Wild Turkeys were said by Lalement (JR 21:195) to be in multitudes "going in flocks through the fields and woods" of Neutralia. However, they have a very low occurrence at almost all of the historic Neutral sites in this comparison. Even at Cleveland where the 57% incidence appears high (Table 2), it should be noted that this is an exaggeration because avifauna only account for .35% of the total faunal assemblage (Table 1).

Historic Neutralia lies near the normal northern limit of the Wild Turkey in southern Ontario (McIlwraith 1894:181; H. Savage, personal communication), although Pierre Boucher (1883:23-24) remembered them in the fields of Huronia in 1640. Evidently Wild Turkeys were extremely sensitive to cold and snow (McIlwraith) 1894:180; Godfrey 1966:119). They normally ran in flocks of 50 to 60 birds (Lahontan 1970:138) and Boucher (1883:42) claimed that their flesh was "more tender than that of a domestic turkey."

In all it can be concluded that the historic Neutral Iroquois ate well on a diet greatly enhanced by varied fauna.

#### *HISTORIC NEUTRAL FAUNAL ARTIFACTS*

Faunal elements were utilized by the historic Neutral Iroquois for a wide variety of tools, personal items and gaming pieces. Table 3 presents a classification of 42 types of specimens based upon their raw material (antler, bone, shell, and teeth) as well as probable function or use. Only select artifacts warrant discussion here but it is apparent that no site has a complete representation. Obviously, grave inclusions as opposed to house and midden contexts affect this representation; the graves often yield exotica such as combs, wampum, and "sucking" tubes.

Since the numerical frequencies for most specimens in Table 3 are so slight, a simple presence/absence comparative technique proves most suitable. In addition to the named excavated samples, specimens known from other historic Neutral sites are added to help corroborate and establish as complete an inventory as possible. The specimens from the other sites reside in collections at McMaster University, the Woodland Indian Cultural Education Center, the Royal Ontario Museum, the National Museum of Man, the Heye Foundation, and with private owners.

Of the 11 artifact styles fashioned from antler, 3 deserve comment. First are the cylindrically carved antler drifts used with centrally pitted anvil stones for indirect percussion flaking of chert. The Neutrals were the paramount flint-knappers of the historic northeastern Iroquois (Harris 1896; Noble 1978:157; S. Jamieson, personal communication), and their indirect percussion technique with anvils and antler drifts can be traced back 1000 years to the Glen Meyer ancestry of southwestern Ontario Iroquois culture (Noble 1975a; Reid 1975).

Perforated antler tines also deserve mention. Houghton (1909:364) once believed such

implements to be definitive items of historic Neutral material culture and they were usually interpreted as being "thong preparers" or "shaft straighteners." It is now known that they are not exclusive to the historic Neutral and that furthermore a better interpretation appears to be that they represent pronged detachable heads for wooden handled cultivators. The differential and angled wear patterns found around the perforation of a tine are consistent with wear that could be developed from force applied through an inserted shaft handle. The pronged tine tips also exhibit a high degree of polish consistent with digging use-wear. Thus, it appears that Clark's (1954) "mattock-head" interpretation for similar perforated antler tines found at Starr Carr, England, is analogous to the specimens from historic Neutral Iroquois sites. Perhaps the Neutral Iroquois antler tine cultivators were used by men in the tobacco fields as remarked by Boucher (1883:55).

Unilaterally barbed antler harpoons, presumably for spearing large lake trout and sturgeon, often appear on the later historic Neutral settlements (Table 3). Both unholed and line-holed retrieval styles occur and many exhibit incised decorations. This spearing of large fish contrasts with the usual netting and angling techniques for smaller stream species. Various contributory creeks to the Grand River below the first shoal waters encountered at Brantford had spring-running sturgeon swimming up them even as late as 1818 (Cornell 1889:77). A general increase in fishing is noted on the post AD 1625 Neutral town sites (Table 1).

Bone constitutes the medium most favoured for artifact production by the historic Neutral Iroquois. In particular, two artifact styles appear to be distinctive of this people: deer ilium beamers and large tubes. The beamers, first identified at the Cleveland site by Jim Burns (1972), provided useful "drawknives" for scraping subcutaneous fat during hide preparation.

Large hollow tubes are distinctive to the historic Neutral as Houghton (1909:364) once observed, and they are usually interpreted as being shaman's "sucking" tubes. In contrast to beads, such tubes measure 60 to 157 mm long, often bear geometrically incised decorations, and are usually fashioned from mammal long bones, particularly deer and dog radii (Lennox 1981; Wright 1981). Settlement and burial contexts produce these "shaman" tubes, but to date, they have been recovered only from historic Neutral sites dating post AD 1620.

A third artifact is the deer toe bead made from the distal joint of a deer proximal phalanx. They appear at the late prehistoric Southwold and Lawson sites as well as at the Draper site (Wintemberg 1939; McCullough 1978:74,75). The occurrence of 5 such specimens at the early protohistoric Cleveland village indicates their survival to the circa 1540 era in southwestern Ontario.

Another bone artifact type, the human skull rattle, deserves brief comment although not solely restricted to the historic Neutral Iroquois. Drilled human frontals and parietals and marine shell plates, in addition to the more traditional turtle carapace/plastron rattles, become popular mediums for lashed, handled ceremonial rattles after 1610 in Neutralia. Manufacturing of rattles marks a very different usage of human skull from the traditional fashioning of personal pendants and large circular gorgets. This advent of human skull rattles correlates with an important period of advances in Neutral Iroquois socio-political organization, the intensification of long distance trade, warfare, headhunting, and the taking of captives (Noble 1978;1982).

Of artifacts manufactured from shell, several observations can be made. The volume of marine shell, particularly conchs and whelks, proliferates dramatically on the post AD 1610 historic Neutral sites. This phenomenon reflects the significant increase in long distance trade to Atlantic salt water at Chesapeake Bay and lands further south.

TABLE 3  
HISTORIC NEUTRAL FAUNAL ARTIFACTS\*

	Cleveland	Fonger	Christianson	Thorold	Walker	Hamilton	Other Sites
<b>ANTLER</b>							
1 Flaking Drifts	X	X	X	X	X	X	X
2 Perforated Tines	X	-	-	X	X	X	X
3 Discs	-	X	X	-	-	-	-
4 Chisels or Picks	X	X	-	X	-	X	X
5 Pottery Decorator	-	X	-	-	X	X	X
6 Harpoons	-	-	-	X	X	X	X
7 Combs	-	-	-	X	X	X	X
8 Pendant	-	-	-	X	X	X	?
9 Projectile	-	-	-	-	X	X	-
10 Effigy Pin	-	-	-	-	X	-	-
11 Pipe	-	-	-	-	-	-	X
		X		X			
				X			
<b>BONE</b>							
12 Deer Innominate Beamers	X	-	-	-	-	-	-
13 Deer Toe Beads	X	-	-	-	-	-	-
14 Awls/punches	X	X	X	X	X	X	X
15 Hollow Bone Beads	X	X	X	X	X	X	X
16 Toggle Deer Toes	X	X	X	-	X	X	X
17 Cup and Drilled Deer Toes	X	X	-	X	X	-	X
18 Eyed Flat Needles	-	X	X	X	X	X	X
19 Turtle Rattles	X	-	X	X	X	-	X
20 Spoons	X	-	-	-	-	-	X
21 Discs	-	-	X	-	-	X	-
22 Phalanx Pendants	-	-	-	X	-	-	-
23 Triangular Bone Point	-	-	-	-	X	-	-
24 Large Tubes	-	-	-	-	X	X	X
25 Human Rattles	-	-	-	-	X	X	X
26 Human Gorgets	-	-	-	-	X	X	X
27 Long Bone Gouges	-	-	-	-	X	X	-
28 Whistles	-	-	-	-	-	X	X
29 Fish Hooks	-	-	X	-	-	-	X
<b>SHELL</b>							
30 Disc Wampum	X	X	X	X	X	X	X
31 Columnar Wampum	X	X	X	-	X	X	X
32 Marginella Beads	X	X	X	-	X	X	X
33 Marine Shell Blanks	X	-	X	X	X	X	X
34 Marine Pendants	X	-	X	X	X	X	X



35	Marine Gorgets	-	-	X	-	X	-	X
36	Marine Shell Disc	-	-	-	-	X	-	-
37	Bevelled Spoon Freshwater Scraper	X	-	-	-	X	X	X
38	Drilled Freshwater Shell	X	-	-	-	X	X	X
39	Cut Freshwater Shell	X	X	X	X	-	X	?
TEETH								
40	Worked Rodent Incisors	X	X	X	-	X	X	X
41	Cut Bear or <i>Canis</i> Canines	X	X	-	-	X	-	X
42	Pendants	X	-	-	-	-	X	X
*X denotes present								

Wampum shell beads, both discoidal and of the rarer columellar shape, became a favoured decorative exchange item for the historic Neutral Iroquois. The occurrence of complete marine shells and worked blanks on historic Neutral sites indicates that much of their wampum and other marine shell artifacts were produced locally in Neutralia after the importation of raw shells. That the Neutrals themselves collected and traded for marine conchs and whelks is historically documented (JR 21:201); to avoid confusion between shell and European glass beads, it is to be noted that wampum shell beads were called "porcelain" by the early French (JR 21:209; Lahontan 1970:76). Use of wampum can be traced back to the late prehistoric Ontario Iroquois of circa AD 1460-1510 in the Hamilton region (McMaster University collections) and at Black Creek, Toronto (Emerson 1954:130). The few specimens, however, indicate a sparse trade for marine shell during the late prehistoric. Historically, the Neutral Iroquois also used marine conchs and whelks for fashioning facsimiles of human skull circular gorgets.

Another marine shell, the *Marginella* (*Marginellidae* sp.), occurs in historic Neutralia and it may have been imported in a finished condition for beads. The glossy shells are always found with a hole ground through their anterior ends, presumably for extraction of the snail within and for stringing attachment. *Marginella* are small shallow water carnivorous marine snails (Emerson and Jacobson 1976:156).

Local freshwater bivalves (*Unionidae* sp.) are also found on all historic Neutral Iroquois sites. One of their uses was for tempering pottery, particularly demonstrated at the Hamilton site where there is an abnormally high 64% incidence of shell tempering (Kenyon 1972; Lennox 1981). Bivalves were also used as a food supplement and for fashioning spoon-like tools. As a food supplement some bivalves must have been boiled whole while others apparently had their meat extracted live. Both Pihl (1977b:4) and Prevec (1981:41) note freshwater clams with a notch broken one centimetre deep in the outer margin of the anterior end near the pseudocardinal tooth from the Hamilton and Cleveland sites. This breakage pattern is indicative of a narrow instrument being forced between the valves to pry open the shell and break the anterior adductor muscle. Raw freshwater "clam on the shell" may have been appetizing for some Neutral Iroquois, or else, the raw meat was simply added to a cooking mixture.

Freshwater bivalves were also fashioned into spoon-like artifacts at some Neutral Iroquois sites. They appear to be particularly distinctive of the early protohistoric Neutral, as evidenced at the Cleveland site where 48 specimens occur. The shells are invariably shaped at their posterior ends to a sharpened point. Waugh (1902:108-109) and Wintenberg (1908:43-44, Plate VII,c) interpreted such shells as scrapers, smoothers and notching implements for shaping wet pottery.

The use of teeth by the historic Neutral Iroquois is limited to only three applications: chisels, knives and decorative pendants. It is noted that rodent incisors are particularly favoured for chisels while bear teeth, especially canines, are used for pendants and longitudinally sliced knives.

In sum, the 42 artifact styles produced by the historic Neutral Iroquois from antler, bone, shell, and teeth cover a wide range of utilitarian, decorative, ritual and personal objects. Bone, antler and shell are the especially favoured media and it is important to note that European metal substitutes did not markedly replace the aboriginal awls, punches, eyed netting needles (bodkins), and harpoons. The traditional faunal artifacts continued to be efficient, useful and perhaps preferred by these early 17th century Iroquois people.

#### *HISTORIC NEUTRAL-PETUN FAUNAL COMPARISONS*

The Neutral and the Petun Iroquois historically appear to have enjoyed close cultural relationships with a common bond in their alliance with the Algonkian-speaking Ottawa Indians (Champlain 1929:99). Thus, it is significant to compare the historic faunal assemblages between these neighbouring Iroquoian allies and to note any major differences. While it may well be that the historic Petun/Ottawa group operated as a beaver fur "cooperative" (Garrad 1981:31), the comparative faunal record of Table 4 indicates that the Neutrals barely exploited their beaver resources. For the Petun faunal information, data is drawn from Peter Hamalainen's (1981) study. The numbers of elements identified below class from each Petun site are as follows: Sidey-Mackey 1731; MacMurphy 819; Melville 926; Hamilton-Lougheed 656; Kelly-Campbell 557.

In contrast to historic Neutral sites where deer, raccoons and squirrels are the most abundant species, the dominant fauna on the Petun counterparts are beaver, woodchuck and bear (Table 4). Whereas, Virginia Deer were copious in historic Neutrovia and were taken in large numbers, it is only at one Petun village, Hamilton-Lougheed, that a sizeable deer sample occurred (15.5%), and this hardly approaches the high percentages found on the contemporaneous Neutral site. Also, squirrel and raccoon hunting was appreciable lower in Petunia than Neutrovia (Table 4), while black bears are rarer on the more southerly Neutral sites than those of Petunia.

Striking differences are seen when the incidences of beaver bone are compared between the historic Neutral and the Petun sites (Table 4). In Petunia, beaver hunting clearly was more prevalent than in Neutrovia, where rich beaver resources were available, but takes were low as indicated earlier. This overall comparison of beaver argues for an intensive and direct involvement with the French fur trade by the historic Petun/Ottawa. Conversely, the historic Neutral Iroquois continued to maintain a vigorous aboriginal trade, and they acquired considerable supplies of French trade goods (Noble 1978:160) primarily through their native intermediaries in Huronia and Petunia. Obviously, beaver was only one and not a particularly important medium of exchange for the Neutrals whereas it constituted a chief trade commodity for the Petun.

The figures also show a progressive decrease of beaver stock in Petunia after 1620, but eradication did not occur and incidences continued to remain higher than any in Neutrovia. Unfortunately, no comparable faunal syntheses are yet available from historic Huronia and thus specific details and statements concerning historic Huron beaver populations and exploitation cannot be tested against the above findings or the ethnohistoric information.

#### *CONCLUSIONS*

In summation, this study has synthesized for the first time a considerable body of information from 6 historic Neutral Iroquois sites representing both town and smaller

**TABLE 4**  
**SEVEN MAJOR SPECIES ON**  
**HISTORIC PETUN AND NEUTRAL SITES**

	Virginia Deer	Beaver	Woodchuck	<i>Canis</i> species	Black Bear	Raccoon	Grey Squirrel
<b>PETUN</b>							
Sidey-Mackey 1580-1610 A.D.	8.1	43.4	10.1	18.8	8.3	0.5	0.3
MacMurchy 1595-1615 A.D.	3.3	44.7	21.7	3.6	18.1	0.9	-
Melville 1600-1620 A.D.	3.9	41.1	21.4	11.8	10.9	0.3	0.1
Hamilton-Lougheed 1616-1640 A.D.	15.5	35.5	5.8	12.2	24.5	0.4	-
Kelly-Campbell 1639-50 A.D.	9.5	27.3	9.3	19.2	14.5	7.8	-
<b>NEUTRAL</b>							
Cleveland ca. 1540 A.D.	64.6	3.0	1.3	12.1	2.9	3.6	0.8
Fonger 1600-20 A.D.	71.5	6.9	0.8	3.8	5.2	2.8	1.1
Christianson 1615-30 A.D.	41.5	19.0	2.1	12.6	1.9	9.0	0.9
Thorold 1615-30 A.D.	33.7	0.7	1.7	8.3	0.7	6.6	33.5
Walker 1620-45 A.D.	70.2	3.6	1.1	1.9	0.6	6.5	10.3
Hamilton 1635-51 A.D.	61.4	3.1	0.7	4.2	2.5	16.9	1.8

village settlements. The faunal record has been enhanced by the excellent state of preservation at these sites and the sample size of identified elements ranging from 1612 minimum to a maximum of 11,607 prove more than adequate. Throughout it has been apparent that the historic Neutrals ate well with a varied diet high in protein, and that they probably acquired some surplus Virginia deer and squirrels. It is entirely reasonable to believe that such surpluses could produce pelts and meat suitable for trade.

The analyses indicate not only copious deer, raccoon, and squirrel hunting by the Neutrals but also an increase in avian takes through time. High percentages of birds are correlated with size of site, in this case, the large towns have the highest incidences.

An artifact classification has been offered that recognizes 42 different types of tools, personal items, ritual paraphernalia, and gaming pieces fashioned by the historic Neutrals from faunal material. Bone was the preferred faunal medium, followed by antler, shell and teeth. Significantly, native faunal artifacts persisted throughout the historic period until 1651 despite the introduction of European metal substitutes. It is noted that deer toe beads declined after the early protohistoric, but that after 1610 other artifacts "fluoresced," particularly the human skull rattles, marine shell goods and antler products such as combs and harpoons. In some cases, alternate functional interpretations have been suggested for specific artifacts (e.g. perforated antler tines as cultivator heads).

Finally, upon comparing the historic Neutral faunal assemblages with those of the more northerly allied Petun, significant differences emerge. Specifically, the very high rate of beaver elements on the historic Petun sites contrasts with the substantially lower incidence on the contemporaneous Neutral settlements. It is suggested that the Neutral Iroquois beaver counts probably reflect differences in local beaver availability, differences in processing locality, or conceivably a difference in attitude by various Neutral tribes towards the historic French fur trade. Clearly, the historic Neutrals were not as involved in direct beaver trading with the French as were the Petun.

The entire study effectively demonstrates the usefulness of faunal analyses in archaeology, and it also helps to corroborate, negate, or expand upon the ethnohistoric documentation.

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#### REFERENCES CITED

- Banfield, A.W.F.  
1974 *The Mammals of Canada*. National Museum of Natural Sciences, National Museum of Canada.
- Boucher, Pierre  
1883 *Canada in the Seventeenth Century*. Translated by Edward L. Montizambert. Montreal.
- Burns, James A.  
1972 Correspondence to W.C. Noble, Department of Anthropology, McMaster University, Hamilton, Ontario.  
1973 *The Dog Who Couldn't Be*. *Ontario Archeological Society, Arch Notes* 73(4):3-5.
- Burt, William H., and Richard P. Grossenheider  
1976 *A Field Guide to the Mammals*. Houghton Mifflin Company. Boston.
- Champlain, Samuel de  
1929 *The Works of Samuel de Champlain (vol. 3)* (H.P. Biggar, editor). The Champlain Society. Toronto.

- Clark, John G.D.  
1954 *Excavations at Star Carr: An Early Mesolithic Site at Seamer Near Scarborough, Yorkshire*. University Press. Cambridge.
- Cleland, Charles E.  
1966 *The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region*. *University of Michigan, Museum of Anthropology, Anthropology Papers* No. 29.
- Cornell, J.A.  
1889 *The Pioneers of Beverly: A Series of Sketches*. Office of the True Banner. Dundas, Ontario.
- Dailon, Joseph de la Roche  
1866 Letter of July 18, 1627. In Gabriel Sagard's *Histoire du Canada et voyages que les Freres Mineurs Recollects y ont faits pur la Conversion des infidelles*, Vol. 3, pp. 798-811. Librairies Tross. Paris.
- Devereux, Helen E., and Lynn A. Ramsden  
1974 *Once Upon a Cornfield; A Teaching Device*. *Archaeological Survey of Laurentian University, Report No. 1*. Sudbury, Ontario.
- Emerson, John N.  
1954 *The Archaeology of the Ontario Iroquois*. Unpublished PhD dissertation, Anthropology Department, University of Chicago, Chicago, Illinois.
- Emerson, William K., and Morris K. Jacobson  
1976 *The American Museum of Natural History Guide to Shells*. Alfred A. Knopf. New York.
- Fitzgerald, William Richard  
1981 *Lest the Beaver Run Loose: The Early 17th Century Christianson Site and Trends in Historic Neutral Archaeology*. Unpublished MA thesis, Department of Anthropology, McMaster University, Hamilton, Ontario.
- Freer, Stan  
1980a *Faunal Analysis of Midden 8 Thorold Site (AgGt-1), Lincoln County, Ontario*. Manuscript on file at the Department of Anthropology, University of Toronto, Toronto, Ontario.  
1980b *Faunal Analysis of the Thorold Site (AgGt-1), Lincoln County Ontario: A Summary*. Manuscript on file at the Department of Anthropology, University of Toronto, Toronto, Ontario.
- Garrad, Charles  
1981 *The Petun as Seen in 1981 — A Georgian Bay Fur Trade Cooperative*. *Ontario Archaeological Society, Arch Notes* 81 (5):31-38.
- Godfrey, W.E.  
1966 *The Birds of Canada*. Biology Series 73. *National Museum of Canada Bulletin* No. 203.
- Greenway, James C. Jr.  
1967 *Extinct and Vanishing Birds of the World*. Dover Publication, Inc. New York.
- Halliday, Tim  
1978 *Vanishing Birds*. Sidgwick and Jackson. London.

- Hamalainen, Peter  
 1981 Patterns of Faunal Exploitation by the Petun Indians. Unpublished MA thesis, Geography Department, York University, Toronto, Ontario.
- Harris, William R.  
 1896 A Forgotten People: The Flint Workers. *Publications of the Buffalo Historical Society* 4:227-244. Buffalo, New York.
- Houghton, Frederick  
 1909 The Indian Occupancy of the Niagara Frontier. *Bulletin of the Buffalo Society of Natural Sciences* 9(3):263-374, Buffalo, New York.
- Jesuit Relations OR)  
 1896- *The Jesuit Relations and Allied Documents* (73 volumes) (Reuben Gold Thwaites, editor). The Burrows Brothers Company. Cleveland.  
 1901
- Kenyon, Ian T.  
 1972 The Neutral Sequence in the Hamilton Area. Paper presented at the Fifth Annual Meeting of the Canadian Archaeological Association, St. John's Newfoundland.
- Lahontan, Louis Armand de Lom d'Arce  
 1970 *New Voyages to North America* (vol. 1) (Reuben Gold Thwaites, editor). Reprint of 1703 edition. Burt Franklin. New York.
- Langley, S., and B. Smith  
 1980 Faunal Analysis of the Thorold (AgGt-1) Site, Lincoln County, Ontario. Manuscript on file at the Department of Anthropology, University of Toronto, Toronto, Ontario.
- Lennox, Paul  
 1981 The Hamilton Site: A Late Historic Neutral Town. *National Museum of Man, Mercury Series, Archaeological Survey of Canada Paper No. 103*.
- McCullough, Karen  
 1978 Modified Deer Phalanges at the Draper Site. Unpublished MA thesis, Department of Archaeology, University of Calgary, Calgary, Alberta.
- McIlwraith, Thomas  
 1894 *Birds of Ontario* (2nd edition). William Briggs. Toronto.
- Marchand, Elizabeth, and Irene Knutson  
 1972 Faunal Material of the Cleveland Site—A Preliminary Sample. Manuscript on file at the Department of Anthropology, University of Toronto, Toronto, Ontario.
- Noble, William C.  
 1970 An Unusual Neutral Iroquois House Structure. *The Bulletin of the New York State Archaeological Association* 48:14-15.  
 1972a *Neutral Settlement Patterns*. Paper presented at the Fifth Annual Meeting of the Canadian Archaeological Association, St. John's, Newfoundland.  
 1972b The Cleveland Neutral Village (AhHb-7): A Preliminary Statement. Manuscript on file at the Department of Anthropology, McMaster University, Hamilton, Ontario.  
 1974 Walker Site Field Notes. On file at the Department of Anthropology, McMaster University, Hamilton, Ontario.  
 1975a Van Beisen (AfHd-2): A study in Glen Meyer Development. *Ontario Archaeology* 24:3-95.

- 1975b Canadian Prehistory: The Lower Great Lakes - St. Lawrence Region. *Canadian Archaeological Association, Bulletin* 7:96-121.
- 1977 The Historic Location and Political Confederacy of the Neutrals. Paper presented at the Ontario Archaeological Society Symposium, Toronto, Ontario.
- 1978 The Neutral Indians. In *Essays in Northeastern Anthropology in Memory of Marian E. White* (William E. Engelbrecht and Donald K. Grayson, editors). *Occasional Publications in Northeastern Anthropology* 5:152-164.
- 1980 Thorold: An Early Historic Niagara Neutral Town. In *Villages in the Niagara Peninsula*, Proceedings of the Second Annual Niagara Peninsula History Conference, Brock University:43-55. St. Catherines, Ontario.
- 1982 Historic Neutral Iroquois Settlement Patterns. Paper presented at the Annual Meeting of the Canadian Archaeological Association, Hamilton, Ontario.
- O'Leary, Thomas
- 1912 *Canadian Letters: Description of a Tour Thro' the Provinces of Lower and Upper Canada in the Course of the Years 1792 and '93*. C.A. Marchand. Montreal.
- Pihl, D.A.
- 1977a Faunal Analysis of the Hamilton Site (AiHa-5) Preliminary Report. Manuscript on file at the Department of Anthropology, McMaster University, Hamilton, Ontario.
- 1977b Faunal Analysis of the Hamilton Site, An Early Historic Iroquois Town Site. Paper presented at the 10th Annual Meeting of the Canadian Archaeological Association, Ottawa, Ontario.
- Prager, Gabriella
- 1980 Fonger Site Faunal Analysis. Report on file at the Department of Archaeology, Simon Fraser University, Burnaby, British Columbia.
- Prevec, Rosemary
- 1980 The Christianson Site (AiHa-2) Faunal Report. Manuscript on file at the Department of Anthropology, University of Toronto, Toronto, Ontario.
- 1981 The Cleveland Site (AhHb-7) Faunal Report. Manuscript on file at the Department of Anthropology, University of Toronto, Toronto, Ontario.
- Reid, C.S.
- 1975 The Boys Site and the Early Ontario Iroquois Tradition. *National Museum of Man, Mercury Series, Archaeological Survey of Canada Paper No. 42*.
- Rick, A.M., and Stephen Cumbaa
- 1976 Fish, Reptile and Amphibian Remains from the Walker Site. Report on file at the Department of Anthropology, McMaster University, Hamilton, Ontario.
- Sagard, Gabriel (Theodat)
- 1939 *The Long Journey to the Country of the Hurons* (G.M. Wrong, editor). The Champlain Society. Toronto.
- Silieff, E., and A.M. Rick
- 1976 Analysis of White-tailed Deer (*Odocoileus virginianus*) Remains from the Walker Site (AgHa-9), A Seventeenth-Century Neutral Village Near Brantford, Ontario. Unpublished report in the possession of the authors, Ottawa, Ontario.

- Warrick, Gary A.  
1979 1978 Archaeological Investigations of Fonger Prehistoric Neutral Village Site (AhHb-8): Preliminary Results. Report on file at the Ontario Ministry of Citizenship and Culture, Ontario Heritage Foundation, Toronto, Ontario.  
1982 The Fonger Site: A Protohistoric Neutral Community, Report on file at the Ontario Ministry of Citizenship and Culture, Ontario Heritage Foundation, Toronto, Ontario.
- Waugh, Frederick, W.  
1902 Notes on Canadian Pottery. *Annual Archaeological Report of Ontario*, 1901:108-115.
- Wintemberg, W.J.  
1908 Use of Shells by Ontario Indians. *Annual Archaeological Report of Ontario*, 1907:38-90.  
1939 Lawson Prehistoric Village Site, Middlesex County. *National Museum of Canada Bulletin 94*.
- Wright, Milton J.  
1981 The Walker Site. *National Museum of Man, Mercury Series, Archaeological Survey of Canada Paper No. 103*.

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