Faunal Analysis of the White Site

JAMES A. BURNS

INTRODUCTION

While the archaeology at the White site was not extensive (more in the nature of test exploration), the 1756 items of zoological material represent a varied fauna. It might be more prudent to await further work at the site, however, since interpretation of the present material is limited – mostly by the lack of field data on habitation features. All we know for certain at this stage is that the squares in the NE quadrant (40–44N 3–7E) are in a midden area, and that no aligned post moulds were discovered during excavation.

The figures in Table I would indicate a heavy reliance on fish resources, but one is cautioned to play down the importance of fish to some degree because a great proportion of the fish bones were ribs and spines which are not placeable in the skeleton and cannot, therefore, yield data on individual numbers of fish. It is felt, however, that fish did play a significant role in the diet.

Avian sources of bone are also important, the more so considering the abundance of passenger pigeon bone from at least 7 individuals (see Table II). Of some surprise is the number of frog and/or toad bones. One reason for the unusually good amphibian representation is that some samples were subjected to flotation treatment. Unfortunately, control was erratic during this phase, and volumetric data are scarce, so that the relative value of the process cannot be judged. Crawford was similarly impressed by the paucity of field data relating to the collection of floated seed samples (Crawford, pers. comm.).

Human material was also recovered – bone representing at least three individuals was found primarily in the NE midden squares. The manner of deposition of this bone is the subject of further discussion. Material used for this analysis included all worked and unworked faunal remains.

ZOOLOGICAL DESCRIPTION OF THE FAUNAL REMAINS

Mammalian Remains:

Rabbits and Hares:

Seventeen bones were ascribed to the Order of rabbits and hares, only one of which was definitely hare. Since both are difficult to distinguish osteologically and may both be found in the Pickering area, it was felt prudent not to attempt any further separation; the one undoubted identification of hare was a maxillary portion with palate and teeth. Cleland (1966) notes that several York County sites, to the west of Pickering, contained snowshoe hare remains (see Cleland's map, p. 260).

Squirrels, Woodchuck, and Chipmunk:

The squirrel suborder of the Rodentia was not well represented here. The whole sample is small but this often cited group boasts only seventeen bones. Woodchuck is known from 8 of the items.

Beaver:

Beaver remains identified number 17, ranking 4th on this basis. However, a minimum number of individuals indicates at least three specimens, based on selection of the lower left incisor; this last computation may be somewhat skewed by the fact that 9 of the portions identified as beaver were incisor teeth or portions thereof, of which three were *worked* lower right incisors.

Mice and Muskrat:

Since the small mice are not considered of great

Table I Distribution of Faunal Remains by Classes

Class	No. of Bones		%
Identified Mammal	216		
Unidentified Mammal	298	514	29.9
Identified Avian	123		
Unidentified Avian	112	235	13.7
Identified Fish	53		
Unidentified Fish	812	865	50.3
Identified Turtle	10		
Unidentified Turtle	10	20	1.2
Unidentified Amphibian	75	75	4.4
Indeterminate	9	9	0.5
Identified Snail	14	–	–
Unidentified Snail	8	–	–
Unidentified Clam	16	–	–
Total	1756	1718	100

importance in the human diet, they will not be treated at length here; their bones can be found in just about any field situation and probably signify intrusions.

The muskrat, a more substantial member of the mouse suborder of rodents, was recognized from 8 items representing at least 2 individuals. They can be found on most waterways.

Porcupine:

Seemingly uncommon in southern Ontario archaeological sites, this creature was identified by 5 bones in a single feature – Feature 3, 38–40N 0–2W (Bag #99). Three incisors and two limb bones derive from a single animal, in all probability, perhaps supporting the notion that they were scarce in the region. The two limb bones, a femur and an ulna, had had their articular ends removed; yet the method seems to be neither cutting nor chewing.

Domestic Dog:

Thirty-nine portions were ascribed to the category *Canis* sp. cf. Dog, relying almost entirely on the criterion of size to separate dog from larger, possible wolf remains. In fact. two bones were of dimensions greater than those of an Indian dog recovered from the 16th century Huron village at the Fournier site, Midland, Ontario (Burns, n.d.a.). One item (302:1) from the NE midden consisted of a left maxilla and palatine with all the teeth except the incisors. While it retained some "youthful" characters, including several open tooth roots and signs of alveolar resorption, the dental pattern was adult, if only slightly attrited; it compared well in size with the Fournier dog, "Woofie".

It may also be here noted that dog bone was quite popular as a medium for bone tools and adornments. Beads, tubes, a possible projectile point, and a scraping instrument are examples; ten of thirty-nine dog remains were artifacts. (See T. Ferguson's report on bone artifacts.)

Red Fox and Fox sp.:

Only three bones were definitely labelled Red Fox, while seven others were left as unidentified Fox sp. The confusion arises from the difficulty in distinguishing the postcranial remains of the sympatric Red and Grey Foxes. Since the latter species has been found in many Ontario middens, it is reasonable to entertain the occurrence of both; however, the White site material did not lend itself to fine distinctions.

Bear and other Carnivores:

Very little bone was recorded for the carnivores, other than dogs. The Black Bear was identified from a single phalanx; a sacrum from a marten and part of a baculum *(os penis)* from an otter were the only other identifiable carnivore remains. Two portions were assigned to the Order Carnivora as the lowest reliable taxon.

Deer:

Slightly less common than dog bones were the remains of deer (35 items, 2.04% of the total assemblage) representing at least one individual. The poor showing of deer in our sample gives support to the notion that the site was a short-term occupation of a specialized nature. In accord with the paucity of deer and the indication of a short habitation period is the fact that, as with dog bone, many of the items referable to deer are also artifacts. "Toggle" type deer phalanges number 10, "cup-and-pin" type only one, with just 17 pieces *not* worked, including several phalanges.

Human:

The most numerous species in the mammalian sample was *Homo sapiens,* yielding 53 portions from at least three persons. The distribution in the site is not especially patterned although 43 items do occur in three contiguous squares of the NE midden. Some definitely juvenile (less than 2 years old) material occurred in 0–2N 18–20E (vertebral arch) and in 42–44N 3–5E and 5–7E (vertebra, ribs, skull vault portions, hyoid, and humerus) with adult bone in all the latter three squares as well as possibly 0–2N 30–32E. Subadult bone, aged roughly between 2 and 17

Table II Distribution and Frequency of Occurrence of Faunal Remains

Species	No. of Bones	%	No. of Indiv.
MAMMALS			
Snowshoe Hare *(Lepus americanus)*	1	0.06	2
Hare/Rabbit (Leporidae sp.)	16	0.93	
Grey Squirrel *(Sciurus carolinensis)*	4	0.23	1
Red Squirrel *(Tamiasciurus hudsonicus)*	3	0.17	1
Woodchuck *(Marmota monax)*	8	0.47	1
Chipmunk *(Tamias striatus)*	2	0.12	1
Beaver *(Castor canadensis)*	17	0.99	3
Mouse (cf. *Peromyscus)*	4	0.23	2
Vole *(Microtus sp.)*	3	0.17	1
Muskrat *(Ondatra zibethicus)*	8	0.47	2
Porcupine *(Erithizon dorsatum)*	5	0.29	1
cf. Dog *(Canis familiaris)*	39	2.27	3
Canis sp.	2	0.12	
Red Fox *(Vulpes vulpes)*	3	0.17	1
Fox sp. (Vulpinae)	7	0.41	
Black Bear *(Ursus americanus)*	1	0.06	1
Marten *(Martes americana)*	1	0.06	1
Otter *(Lutra canadensis)*	1	0.06	1
Carnivora sp. (m)	2	0.12	–
Deer *(Odocoileus virginiana)*	35	2.04	1
Deer/Elk/Moose (Artiodactyla)	1	0.06	
Human *(Homo sapiens)*	53	3.08	3
Unidentified Mammal	297	17.29	–
AVIAN			
Canada Goose *(Branta canadensis* cf. *maxima)*	1	0.06	1
White-winged Scoter *(Melanitta deglandi)*	1	0.06	1
Duck (Anatidae sp.)	1	0.06	1
Ruffed Grouse *(Bonasa umbellus)*	4	0.23	2
Wild Turkey *(Meleagris gallopavo)*	6	0.35	1
Sandhill Crane *(Grus canadensis)*	1	0.06	1
Passenger Pigeon *(Ectopistes migratorius)*	108	6.29	7
Pileated Woodpecker *(Dryocopos pileatus)*	1	0.06	1
Unidentified Avian	112	6.52	–
FISH			
cf. Trout *(Salvelinus)*	1	0.06	1
Pike *(Esox* sp.)	5	0.29	1
Sucker (Catostomidae sp.)	14	0.81	2
Catfish (Ictaluridae sp.)	32	1.86	3
cf. Perch *(Perca flavescens)*	1	0.06	1
Unidentified Fish	812	47.26	–
REPTILE (Turtle)			
Painted Turtle *(Chrysemys picta)*	6	0.35	1
Blanding's Turtle *(Emydoidea blandingi)*	2	0.12	1
Snapping Turtle *(Chelydra serpentina)*	2	0.12	1
Unidentified Turtle	10	0.58	–
AMPHIBIAN			
Frog/Toad (Anura sp.)	75	4.37	5
INDETERMINATE	9	0.52	–
GASTROPODA (Snail)			
Triodopsis albolabris	(9)	–	–
Anguispira alternata	(4)	–	–
Horotoma gracilis	(1)	–	–
Unidentified Snail	(8)	–	–
PELECYPODA (Clam)			
Unionidae sp.	(16)	–	–
Total	1718 (1756)	100	57

years, is found at least in 40–42N 3–5E and 22–24S 0–2W, in the form of a fibula shaft and a femur shaft, respectively. On the basis of distance between some of these squares, we might postulate more than three individuals but on the bones *per se*, regardless of provenience, we can count three persons by age assessment alone, being one of each of juvenile, subadult, and adult.

As for ages of specific items, the infundibulum (term used to indicate fused left and right mandible halves) in 42–44N 3–5E (267:1) is considered to be older than 17 years for the reason that the traces of alveolar resorption indicate pre-mortem loss of all three lower right permanent molars and the first and third lower left molars; eruption of M3 is thought to occur at 17–25 years (Anderson, 1969). A right maxilla from the same square as the mandible (240:1) possesses both deciduous molars; while the "bud" of the permanent M1 is visible, it is embedded well within the alveolus. Thus, according to Anderson's eruption schedule *(op. cit.)*, the child was between 2 and 6 years of age. Another item – paired right and left maxillae – possesses no teeth and the alveolus is broken posterior to the socket of P2; it is thereby inferred that the individual had reached an age *exceeding* 10 years, the average date of eruption for second (permanent) premolars. Juvenile material, being difficult to assess for age, can only be described as extremely young. Several vertebral portions, again from 42–44N 3–5E (250:2,3) featured no signs of arch fusion with centra, and the accompanying rib (250:1) was very small and the caput quite indistinct, with porous cortex. The same square yielded a portion of cranial vault (247:3) which was devoid of sutures and was composed of very thin, porous, unlayered bone. A similar occurrence of such juvenile skull material was revealed in 42–44N 5–7E (285:5–7). According to Anderson *(ibid.)*, the right and left neural arch portions fuse to each other at some time from birth to 2 years; so the above-mentioned vertebral arches represent a very young child, perhaps even a new-

born. The remaining juvenile material includes a humerus shaft with no epiphyses and having a porous-looking cortex, this might well belong to the same individual as the skull portions.

No determination of sex was possible with the material at hand. One other condition of some of the human bone is noteworthy: 4 portions were burnt, being a right 3rd metacarpal (247:1), the vertical, periorbital portion of a left zygomatic (248, 249:1), the paired maxillae of a probable adult (272:1), and a miscellaneous longbone cortical portion (272:2). The uneven blackness of the charred maxillae argues for burning subsequent to fracture of the skull. Taken in tandem with the fact that the adult mandible (267:1) lacks coronoid and condylar portions of the ramus due to the ravages of carnivore teeth, the burnt bones incline one to accept that some cannibalistic ceremony took place at the White site. Two points militate against this suggestion, one being the complete lack of cut marks which generally result from the process of dismemberment and butchering. The other apparent flaw in the argument rests on the presence of extremely young bone, perhaps newborn; and superficial recourse to the ethnographic literature yields no observations of infant consumption.

The deposits of human bone are centred upon the midden squares in the NE quadrant of the site. During excavation, the crew were generally unaware of the presence of human material except for occasional pieces, and no impression of a burial was recorded. The location of the majority of bones in a midden does not suggest a purposeful interment; no pattern of deposition was noted, at any rate. If the site was occupied for very short time periods (single seasons or less) as indicated by various statistics both archaeological and biological, then it is less likely the scene of ceremonial burial. More appealing on the basis of data at hand, is the notion of a human feast, perhaps either as a finale to a mission into enemy territories or by successful enemy raiders at the White site (note the infant and juvenile material). The question is by no means answered and further collection of human remains should help to clarify this problem.

Avian Remains.

Geese and Ducks:

Poorly represented is this family of geese and ducks, with a Canada Goose radial portion, an ulnar portion of White-winged Scoter and an unidentified duck coracoid. What is remarkable about the goose radius is its size which compares favorably with the skeleton of the large subspecies, *Branta canadensis maxima*, in the Royal Ontario Museum collection. Caution is advised, however, as a single specimen is not sound basis for speculation. Godfrey (1966) places this subspecies in southern Manitoba, but it may also have found its way into southern Ontario from time to time (H. Savage, pers. comm.).

Grouse and Turkey:

The Order Galliformes is known from the site by the remains of Ruffed Grouse and Wild Turkey. These were not uncommon residents of the Pickering area in prehistoric times and while grouse is still present, the turkey was extirpated from all of southern Canada. Clarke (1948) records that the turkey was found marginally as far east as Durham County, just east of Oshawa. It was identified in both the Draper and Boys sites, not far from White.

Sandhill Crane:

It is now well established that cranes were at least regular migrants through southern Ontario. A number of crane bones have been identified from Huron sites on the Penetang Peninsula (Savage, 1971) and at the Van Besien and Cleveland sites near Brantford, Ontario (Burns, 1973; n.d.b.). Closer to home, crane remains were recorded from the Boys site (Burns, n.d.c.).

Passenger Pigeon:

Now extinct, this pigeon turns up in a great number of Ontario archaeological contexts. It has been shown to have inhabited all of the southern counties and to have been present even along the shores of Hudson Bay (Mitchell, 1935). The bones of this bird account for 46% of the avian collection and over 6% of the total faunal assemblage; it is obviously a prime food source, and perhaps one of the chief objects of specialized exploitation at the site. Their phenomenal numbers made them easy to capture – even by youngsters with clubs.

Pileated Woodpecker:

Woodpeckers are generally uncommon in Ontario sites but the Iroquois did make use of them for food (Waugh, 1973). This is our largest woodpecker and it inhabits rather densely wooded areas (Godfrey, *op. cit.*).

Fish Remains:

Just over 50% of the faunal bone is derived from fish, but this material is, in large part, weighted by the presence of rib and spine fragments which were counted but which, in reality, are unsuitable for quantitative calculation – as for numbers of individuals. Therefore, the economic signi-

ficance of fish may be considerably less than the above figure represents.

Another problem not dealt with was the number of *identifiable* fish bones which remain unnamed due to the inavailability of adequate reference collections. The few skeletons in the Faunal Lab's collection, coupled with some prior experience in fish bone identification, enabled the writer to recognize at least five species or families. Much can still be accomplished with access to good skeletal materials.

Trout:

The occurrence of trout is not surprising. Bowman's account (see Bowman: this volume) of the white pine forest near the Draper site detailed two early accounts of salmon, trout and several other types of fish being caught in Duffin Creek and in the Niagara River. The inclusion of a single trout(?) bone in Table II was means as an indication that the trout/salmon/whitefish family, Salmonidae, was present. Its proper recognition would significantly reduce the category of "unidentified fish".

Pike (Esox sp.):

This group includes at least the Pike and Muskellunge, but for the present, skeletal resources limit the identification to the genus level.

Suckers:

At the best of times it is difficult to separate the many species of suckers from osteological material alone. Familial characters are fairly distinct, however, and the easily recognized elements have been recorded.

Catfish:

Again, specific characters are hazy in this family, as with the suckers, but the remains so assigned are mostly of a size which excludes the large Channel Catfish. The easy recognition of catfish bone renders the statistics generally reliable and proportionate to their importance.

Perch:

As with the trout/salmon bone, a single item was recorded for perch, simply to indicate its presence. No idea of its actual occurrence is available (lacking adequate reference) but it is felt to be slightly more numerous than the present figures imply.

Turtle Remains:

Three species of turtles are included in the White faunal inventory – Painted, Blanding's, and Snapper. All well within their current range, they attract little attention as turtle bone comprises just a little over 1% of the total sample.

Amphibian Remains:

A total of 75 bones were ascribed to the Order Anura which comprises the frogs and toads. While specific identification must await access to complete reference material it is certain that large members of the order are included, such as the bullfrog. There may also be large remains of American Toad *(Bufo)*, but no firm statement can yet be made. Based on the presence of recognizable elements, the minimum number of individuals is 5, using the urostyle as indicator. The relatively high frequency of amphibian bone is no doubt aided by a certain amount of flotation processing. Unfortunately, not all floated samples were designated as such so that we cannot quantify the success. One sample (254) was the bony component of floated material after Crawford removed seeds, it obtained from 35–40 cm in 3 subunits of 42 -44N 3–5E, and contained 34 amphibian portions. Another sample (303) is not labelled "floated" but contains 14 frog/toad bones; it comes from 24–27 cm of subunit 13, 42–44N 5–7E. Note that both samples are in the NE quadrant.

Indeterminate:

Only nine bones were not classified within the vertebrate phylum; this amounts to a shade over one half percent.

Snails and Clams.

Gastropoda:

With the aid of a shell hobbyist – Dr. E.E. Watson, of Toronto – several species of snails were identified. The commonest was the terrestrial species *Triodopsis albolabris.* One specimen included in this group may be a related species, *T. notata* (66:4). Another very common snail species encounted was *Anguispira alternata.* None of these is of any great interest here; their small size virtually eliminates them from the list of preferred foods, but no doubt they might provide a stop-gap against hunger. That they are on occasion found in small bunches in the soil may often be attributed to their habit of grouping together during aestivation.

A fourth species – specimen donated to Dr. Watson for

his assistance on both the Draper and White site molluscs – was identified as a Tertiary gastropod called *Horotoma gracilis*, a fossil washed out of the limestone deposits occurring through eastern Ontario. Its value lies in its rather good preservation, but one may wonder if such things fascinated the Indian mind which revelled in trinkets and beads.

Pelecypoda:

Most of the clam remains are quite fragmentary but retain enough character to be classified as members of the large, principal family of freshwater bivalves, the Unionidae. The scant evidence would be unreliable grounds for pushing the identification further.

SEASON OF OCCUPATION

With as little data as are presented here, a statement about habitation period is not indicated. One must recall that the White site excavation was primarily an exploratory venture. Seasonal data are best gleaned from the avian remains and the birds are fairly well represented except that nearly half of the bird bone derives from a single species, the passenger pigeon. The pigeon and the sandhill crane would have had the most restricted seasons of availability, being roughly spring to fall; turkey and grouse are non-migratory, and the goose and scoter, given appropriate conditions, may be found on Lake Ontario even in winter; the woodpecker is unpredictable in its migratory patterns and is felt by some to be uncommon (Robbins *et al*, 1966). Thus, seasonal habitation cannot truly be predicted. All of the species could be taken in the warm months and it is worthy of repetition that no sign of any housing structure was recorded, so that summer transience may well explain the evidence. However, all of this is premature speculation.

MODIFICATION OF BONE MATERIAL

Under this heading are discussed such topics as butchering, firing, and erosion of bone (by several agencies). The basic data are presented in Table III. While the actual artifacts are not reported upon (Theresa Ferguson's report covers these), the various other modifications are considered.

A fair number of bones and fragments have been subjected to the effects of heat – total 158, or 9.2%. The other categories of note are "chewed" and "eroded" – particularly "chewed" by carnivores and "eroded" by digestive juices. In fact, about 26 portions of mammal bones were recorded as bearing evidence of both forms of modification. The digestive erosion is deemed to have resulted from the process of assimilation, primarily by dogs; in eating a bone, a dog may crack it open, thus leaving teeth marks on it, but the dog may also swallow portions of bone which are later regurgitated. The writer postulates that such ingestion allows digestive juices to erode the surfaces, thus smoothing edges, rounding out declivities caused by teeth and other agents, and producing a generally shiny surface. This idea was extrapolated from statements by Halstead and Middleton (1973) concerning bone cracking habits of African hyaenas.

Such data on chewed/eroded bone may be useful in settlement pattern discussions as comparisons of house interiors and middens are projected for the Draper site; the indications are that it is a phenomenon of the house

Table III Types of Modification on Vertebrate Bone and Frequency of Occurrence in White Site Faunal Material

	Mammal	Avian	Fish	Turtle	Amphibian	Indeterminate
CHEWED (50)						
Carnivore	44	1	–	–	–	–
Rodent	5	–	–	–	–	–
BURNT (158)						
Charred	17	–	2	2	–	1
Calcined	126	6	1	2	–	1
ERODED (44)						
Digested	39	–	1	–	1	–
Other	3	–	–	–	–	–
BUTCHERED (10)						
Cut Marks	8	1	1	–	–	–

because a very high proportion of the affected bone was recovered from the house dug in 1973. Further data are required from the White site to expedite comparisons.

Almost all of the butchered bone (i.e. those with cut marks) are from the NE midden squares; at least two of the suspected butchered pieces may in fact be portions of, or waste products from, artifacts. Many of the bones eroded through ingestion were also located within the NE midden, but these samples are weighted because a great proportion of the total collection was recovered from the three midden units. Two concentrations of burnt bone were not, however, in refuse areas. Thirty-eight calcined fragments, including eight identified as fox, were recovered from Feature 9, 0–2N 18–20E (63). Further, a sample of 17 mammalian bone fragments obtained from 20–22S 10–12W, subsquare 15 Level 2; single elements of catfish, pigeon, and snail – all unburnt – were taken from the same provenience (126).

DISCUSSION

The White site presents an enigmatic group of data. A sizeable pottery and lithic sample along with many and varied botanical samples combine with the bone assemblages to produce a fascinating puzzle. The latter lot of material is not overwhelming in extent but the variety and distribution within the animal kingdom are unusual. Too, that human remains, seemingly out of burial context, should outnumber the normal food species complicates the designation of site function.

Large game does not figure prominently, since bear and deer contributed only 2.16% of all the bone. The avian component appears quite significant. The botanical samples examined by Crawford indicates significant exploitation of local flora, including several berry varieties, as well as the cultivation of Indian corn. This, surficially suggests a small hamlet maintained for the purpose of exploiting specific seasonal sources of food in the area. If this hamlet were convenient to corn plantations, further evidence might be sought for designating it as a corn-tending headquarters, since the abundance of seeds of other plants would argue for tracts of largely uncultivated land. That big game species are minimally represented may indicate either a scarcity of deer and bear, or a lack of emphasis on this resource. The writer is uncommitted in this regard.

Additionally, the interesting yet complicating data on the human bones make little sense at present. The age variations (newborn to full adult), the state of burnt bone, and the lack of cut marks do not yield a pattern entirely consistent with burial or cannibalism, but a strange mixture. Now that we are aware of the presence of considerable amounts of dissociated human bone in the NE quadrant, we may be able to distinguish the original method of deposition, given careful excavation.

CONCLUSION

Based on a small sample of bone, we are inclined to believe the White site to be a small, seasonal village supporting families engaged in a local foraging economy. By Cleland's (1966) definition, it is a "diffuse" economy which is dependent upon hunting, trapping, fishing, gathering of floral species, and possibly of corn horticulture. The presence of human remains of wide age range might be explained by postulating a burial of convenience, contrary to the Huron ossuary customs; it does not make sense to ascribe the death of an infant to human hunger, especially in the midst of such seeming abundance of other food. Hopefully, future excavations will assist in the elaboration of the problem.

ACKNOWLEDGEMENTS

I wish to thank Mr. Brian Hayden, Field Director of the Pickering Area Salvage Project in 1973, under the auspices of the Federal Ministry of Transport and Communication and the National Museum of Man, Archaeological Survey of Canada, Ottawa, Ontario, for giving me the opportunity to examine the White site bone material. While Mrs. Patsy Cook was in charge of the White site crew, it was Brian who approached me with the offer to do the analysis. Patsy has assisted in several ways to a better understanding of the site.

The faunal Osteology Lab, Dept. of Anthropology, of the University of Toronto was headquarters during the analysis; to the Supervisor of the Lab, Dr. Howard Savage, and to the Department, I owe a debt of thanks for permission to use the facilities and collections of the Lab. The avian material was to some extent identified in the Faunal Lab, but many were confirmed with reference to the avian skeletal collections housed in the Dept. of Ornithology, Royal Ontario Museum, and thanks are due for the permission to examine the collection to the Curator, Dr. Jon C. Barlow.

REFERENCES

Anderson, J.E.
1969 *The Human Skeleton.* Nat. Mus. Canada; Ottawa.

Burns, J.A.
1973 Faunal Analysis of the Van Besien Site, (AfHd-1): A Component of the Glen Meyer Stage of the Ontario Iroquois Tradition. Report submitted to Wm. C. Noble, McMaster University, Hamilton, Ontario.

n.d.a. The Fournier Dogs: An Analysis. Unpublished MS.

n.d.b. Faunal Analysis of the Cleveland Site, Brant County, Ontario. Unpublished MS.

n.d.c. Faunal Analysis of the Boys Site, Pickering Township, Ontario. Unpublished MS.

Clarke, C.H.D.
1948 The Wild Turkey in Ontario. *Sylva* 4(6): 5–24.

Cleland, C.E.
1966 The Prehistoric Animal Ecology and Ethno-Zoology of the Upper Great Lakes Region. Anthrop. Papers, *Museum of Anthrop., Univ. of Michigan, No. 29.* Ann Arbor.

Godfrey, W.E.
1966 The Birds of Canada. *Nat. Mus. Can. Bull.* #203. Queen's Printer, Ottawa.

Halstead, B. and J. Middleton
1973 *Bare Bones: An Exploration in Art and Science.* Univ. of Toronto Press, Toronto and Buffalo.

Mitchell, M.
1935 The Passenger Pigeon. *Contr. Roy. Ont. Mus. Zool.* 7: 1-181.

Robbins, C.S., Bruun, B., Zim, H.S. and A. Singer
The Birds of North America. Golden Press, New York.

Savage, H.G.
1971 Faunal Analyses of the Maurice and Robitaille Sites, Simcoe County, Ontario. In: Hurley, W.M. and Heidenreich, C.E., 1971. Palaeoecology and Ontario Prehistory. *Dept. of Anthropology, Univ. of Toronto, Research Report No. 2.*

Waugh, F.W.
1973 Iroquois Food and Food Preparation. *Canada Department of Mines, Geological Survey, Memoir 86. (National Museum of Man Facsimile Edition; first published 1916).*