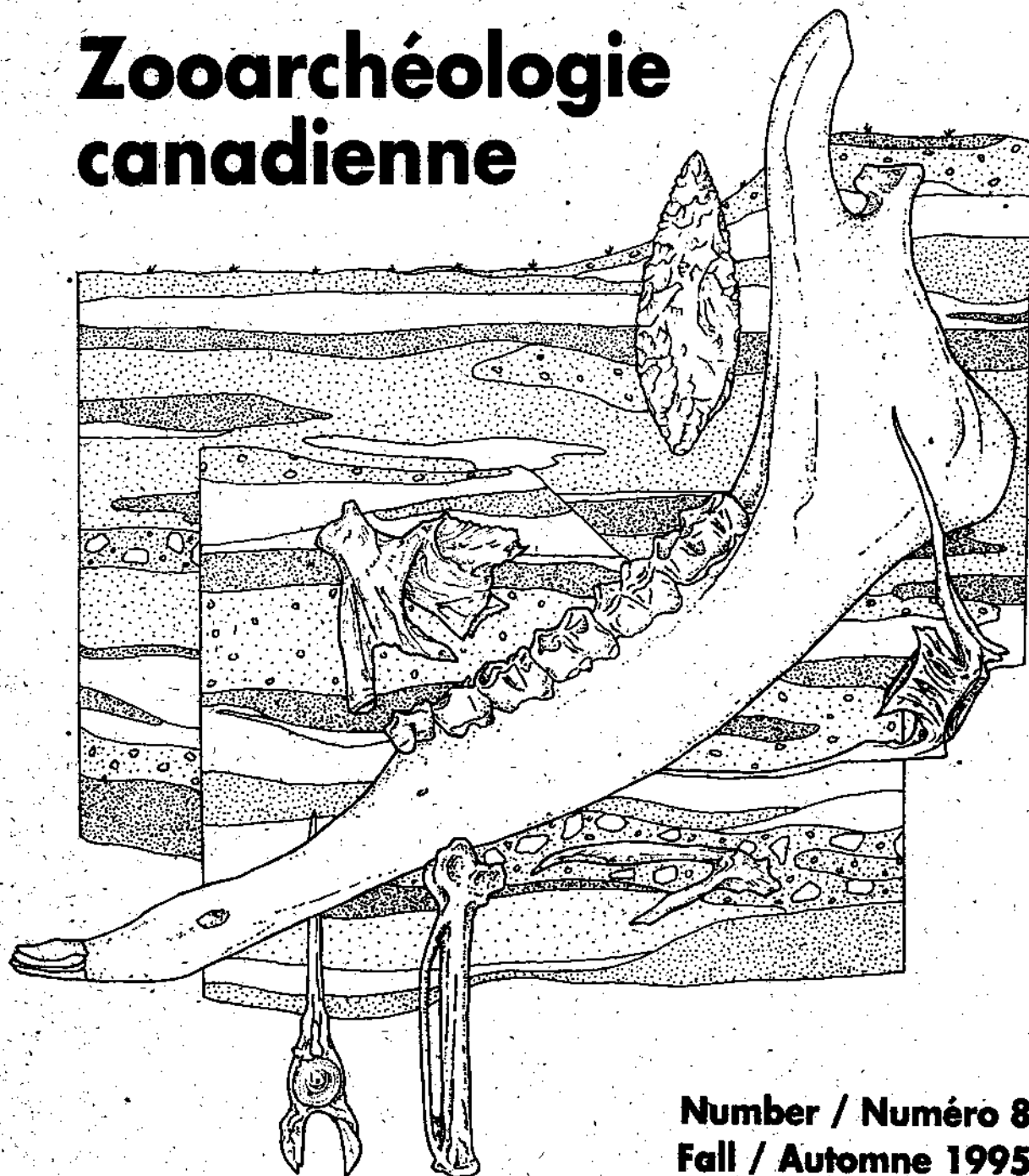


Canadian Zooarchaeology

Zooarchéologie canadienne



Number / Numéro 8
Fall / Automne 1995

Canadian Zooarchaeology/Zooarchéologie canadienne

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EDITOR'S NOTE/NOTE DE L'EDITEUR

Welcome back to everyone starting a new academic year!

I would like to draw attention to a special session at the CAA in May to honour Dr. Howard Savage. Dr. Savage retired in May of this year after many years of teaching the Faunal Osteoarchaeology course at the University of Toronto. Dr. Savage built up one of the largest zooarchaeological collections in Canada, and has trained many of the zooarchaeologists now working in Canada and elsewhere. Fran Stewart is organising the day-long session and invites papers in Dr. Savage's honour. Dr. Savage will be attending, and a wine and cheese party is planned for after the session. See the Call for Papers notice (Page 19) on how to contact Fran.

I would also ask everyone to take note of a new group - Association of Professional Zooarchaeologists of Ontario - which have drafted

recommendations regarding the recovery and treatment of zooarchaeological remains in Ontario. See Page 19 for information on this organisation.

This issue continues our focus on regional zooarchaeology, with part 2 of Jon Driver's article on BC zooarchaeology, as well as articles by J. Cooper and E. Simonds. Next issue will feature an article on zooarchaeology in the Maritimes, by B. Murphy and D. Black.

Canadian Zooarchaeology is published twice a year at the Canadian Museum of Nature. News, letters, articles, books for review should be sent to: Dr. Kathlyn Stewart, Zooarchaeology, Canadian Museum of Nature, P O Box 3443, Station D, Ottawa, Ontario, K1P 6P4 Telephone 613-941-4409 FAX 613-954-4724 Submissions will be published in either English or French.

Subscription costs (including GST) are:

Cdn \$8.50 - Individuals

Cdn \$17.00 - Institutions

Please remit to CZ by cheque or money order, made out to the Canadian Museum of Nature - Zooarchaeology.

Cover drawn by Debbie Yee Cannon

ZOOLOGY IN BRITISH COLUMBIA (Part 2)

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*This article is an abridged version of
"Zooarchaeology in BC" published in BC
Studies no.99, Autumn 1993, p.77-105.*

*This is the second of two parts with Part 1
published in Canadian Zooarchaeology in the
Spring 1995 issue (#7).*

ZOOARCHAEOLOGY AND SOCIAL ORGANISATION

British Columbia was home to some of the most famous prehistoric and historic hunter/gatherers in the world. Much of the discussion about the development of social and political organisation of coastal societies has revolved around resource use and resource control, yet zooarchaeological research has really not contributed a great deal to this discussion. The most obvious cause of this is the small number of well preserved faunal assemblages from sites older than about 5000 years. The Glenrose Cannery site on the Fraser River has demonstrated some changes in faunal use through time (Matson 1976), but there are no striking changes in the faunal remains. At Namu on the north central coast a maritime adapted economy is evident from as early as 7000 B.P. (Cannon 1991). If anything, zooarchaeological studies are pushing the beginnings of the marine oriented economy further and further back, and it is less easy to see the origin

of northwest coast complex hunter-gatherer societies as caused by drastic changes in the marine environment and the associated fauna.

Matson (1992) has argued that the origins of the Northwest Coast "pattern" of ranked societies associated with permanent winter villages does not lie in the development of a maritime economy dependent on salmon, which was the basis of Fladmark's (1975) hypothesis. Instead, he proposes that it was the development of salmon storage which was critical. Stored salmon is indicated by a relatively low amount of cranial bones, because salmon was decapitated before being dried for storage. At the Crescent Beach site the frequency of salmon head bones declines after the St. Mungo phase, suggesting the salmon storage began in Locarno Beach times (c. 3500 B.P.) (Matson 1992:Figure 14). Clearly zooarchaeological data are critical to this analysis, and further studies along these lines are needed to see if the pattern is found in other sites and other regions. However, it would be as well to remember Monks' caution against "salmonopia" - focusing archaeological attention on salmon exploitation to the exclusion of other species (Monks 1987:119). Salmon is certainly common at many coastal sites, but not all faunal assemblages are dominated by salmon. Nor can one suggest that salmon storage alone was responsible for the development of the Northwest Coast ethnographic pattern of social organisation. Salmon was caught, processed and stored in large quantities along the interior rivers of British Columbia, yet population densities do not seem to have been as high as on the

coast, nor was social organisation as complex. The development of large scale salmon fisheries and storage capacities per se cannot be linked to the evolution of complex social organisation. It is possible that the difference between coastal and interior resource bases is that the former had an abundance of other reliable resources (shellfish, herring, flatfish) which significantly reduced the risk of reliance on a single staple. Conversely, although interior salmon runs were highly productive, there were fewer alternative resources to buffer years of low productivity. Detailed study of the more common species in coastal faunal assemblages might lead to better understanding of risk-reducing strategies.

In spite of claims that resources were controlled by high status individuals or families in complex hunting and gathering societies (e.g. Hayden 1992), there has been little demonstration of this in British Columbia. This is probably because there has been little systematic effort to investigate intra-site variation in any class of data, let alone faunal remains. For example, there has yet to be an excavation of a coastal site in the province which reveals the layout of well-defined prehistoric houses and which collects the associated fauna, and it is therefore impossible to relate deposits of animal remains to sub-groups or households within a site. If resources were being controlled through social organisation, we can only expect to find evidence for this in the differential distribution of faunal remains. On the coast this should include studies of a range of species, not just salmon. On the Northwest Coast as a whole, house

excavations are relatively rare, but two recent excavations in Oregon and Washington show that it is possible to retrieve fauna from relatively complete houses. Chatters et al. (1990) demonstrated that significant spatial variation in faunal remains occurs, but Ames et al. (1992) have shown how complex the internal deposits of houses are likely to be, and one must investigate site formation processes in detail before using intra-site variation as evidence for differential access to resources. From the interior, one might expect different pithouses to produce evidence of differential resource use, and there is some preliminary data to suggest this may be the case. Berry (1991) reports varying frequencies of different species of salmon in small and large pithouses. There may also be differences in the relative consumption of deer, in the overall density of bones, and in the degree of storage (K. Kusmer and B. Hayden, personal communication 1993).

Crabtree (1990) has summarised examples of zooarchaeological contributions to social archaeology. Although most of her examples are of zooarchaeological analysis undertaken on state-level societies, there is no reason why the social organisation of complex hunter-gatherer cultures could not be examined in the same way. For example, Romanoff (1988) has described in some detail the social importance of deer hunting among the Lillooet. Evidence for deer hunting in archaeological sites could be examined in the light of this study. One might want to know whether there was evidence for division of meat in particular ways, or whether some sites or houses within sites showed

evidence for greater consumption of deer. On the coast there is the possibility that evidence for the potlatch might show up in detailed studies of shell middens. Both Ham (1982) and Hanson (1991) have tried to isolate individual depositional episodes in midden sites. One would expect the refuse resulting from potlatches to be quantitatively and qualitatively different from everyday refuse. Without trying these sorts of analyses we cannot explore the full potential of zooarchaeological studies for archaeological interpretation. Until they are undertaken we cannot speculate on the possibility of successfully identifying social organisation in British Columbia's archaeological sites.

CONCLUSIONS

In reviewing some of the faunal data from B.C. one is struck by the fact that so much of the general archaeological interpretation is based on the concept that access to, and control of, animal resources was a primary factor in shaping prehistoric cultures, but how few faunal analyses have approached the data from this perspective. Most zooarchaeological studies in B.C. have been oriented towards fairly descriptive accounts of species represented at a site. The quality of data reporting is now fairly high, both in published and unpublished analyses, and zooarchaeologists are aware of the need to recover column samples, especially from coastal sites. Data are now routinely collected and described using standards which should allow regional syntheses of subsistence and diet. These types of studies are likely to be of far greater use in

understanding prehistoric subsistence than individual site reports.

Future trends in British Columbia zooarchaeology are difficult to predict. However, it is to be hoped that zooarchaeologists will try to contribute more to the general theoretical questions raised by complex hunting and gathering societies in many areas of British Columbia. Topics for future research include: seasonality studies of different species on the same site; examination of the importance and reliability of non-salmon species in coastal sites; studies of access to resources; analysis of food storage; human impact on local animal populations.

ACKNOWLEDGEMENTS

I am grateful to Knut Fladmark for inviting me to prepare this paper and for his critical editorial comments. Roy Carlson directed me to some recent literature on the coast. Greg Monks drew my attention to some weaknesses in an earlier draft and provided many suggestions for improvements. Tammy Yeske helped with the literature search.

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### **BONING UP ON THE TURTLE TAIL**

by Janet Cooper  
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When was the last time you identified a bone that bears more than a passing resemblance to the unshelled brazil nut in a faunal sample?

Many Canadian zooarchaeologists may never have done so, given that the caudal osteoderms which provide the tail of the snapping turtle (*Chelydra serpentina*) with its saw-toothed appearance are unlikely to be included in a reference specimen. They are "skin deep only" heterotrophic bones easily overlooked in the skeletal preparation process.

Recently, half a dozen of these superficial dermal ossifications were encountered during examination of a protohistoric feature from the Cloudman site (20CH6) on Drummond Island, Michigan (west of Manitoulin Island). Being bones of a compact nature, they were recovered complete, making determination of class the initial task. However, given that this feature held hundreds of snapping turtle bones attributable to several very large individuals, it was intuitively felt that these unknown specimens "must be snapper".

And indeed they were. A query put to Kevin Seymour in the Royal Ontario Museum's Department of Vertebrate Palaeontology provided confirmation. He agreed that these osteoderms are usually overlooked in skeletal preparation, but, thanks to the acquisition of a mummified snapping turtle specimen, the osteoderms,

individually protected by a sheath of keratinous material, were readily observable and retained with the reference skeleton.

The size of these bones, held in the skin by strong dermal connective tissue, decreases from anterior to posterior in an individual. Although somewhat variable in morphology, as the drawings here illustrate, they are still easily recognizable as snapping turtle caudal osteoderms by their longitudinal dorsal keel and by the angled ventral surface, the major portion of which is flat and all of which displays pits functioning as nutrient pathways.

Some specimens, such as that in Figure A, also have an observable ridge or bevel near the ventral surface, marking the level at which the osteoderm contacts the turtle's skin.

Ross McCulloch in the ROM's Department of Ichthyology and Herpetology confirms that, for material from non-marine sites in Canada and the northern United States, these osteoderms can confidently be assigned to snapping turtle. A number of chelonians, crocodilians and lizards in other parts of the world, including Canada's marine environments, also have osteoderms; in chelonians this form of dorsal bony armour normally appears on the tail and/or the limbs.

Taken as a whole, osteoderms are very variable in morphology: some are similar to those of the snapping turtle, but there are examples with lethal looking spurs and many are flat-topped rounds, looking very like a biscuit. In all cases, size depends on the size of the individual as well as location on the body; a collection of morphologically-

similar osteoderms of varying size can therefore all be those of a single individual, making them useless in terms of any MNI calculations.

Nonetheless, the nature of osteoderms makes them very resistant to destruction and, in those Canadian faunal samples where they appear, they permit a species-specific identification that may sometimes prove quite useful to the zooarchaeologist.



SNAPPING TURTLE  
CAUDAL OSTEDERMS

JANET COOPER  
3/93

**BOOK REVIEW**

Mackay, W.C., Ash, G.R., Norris, H.J. (eds). 1990.

**Fish Ageing Methods for Alberta.**

Edmonton: R.L. & L. Environmental Services Ltd. in assoc. with Alberta Fish and Wildlife Div. and University of Alberta, 113 pp.

by Eric Simonds

Dept. of Canadian Heritage, Cultural and Natural Ecology Unit, Winnipeg, Manitoba.

This manual is the outcome of a workshop on Fish Ageing sponsored by the Fish and Wildlife Division of Alberta Forestry, Lands, and Wildlife in September, 1986, which included representatives from the provincial government (Fish and Wildlife Division), the private sector (e.g., environmental consultants), and academia (the University of Alberta). The workshop participants "were chosen on the basis of their experience in ageing fish, each participant being responsible for presentation of the techniques used to age one or more species of fish" (p. iv).

As explained in the Introduction (Chapter 1), the book is roughly divided into three sections. "The first part, Chapters 2 through 5, deal with general issues pertaining to ageing fish. These include standardization of how data are reported, the use of data in mathematical models to characterize growth of fish from different populations, general approaches to ageing fish, and a consideration of criteria for the validation of an ageing technique. The second part, Chapter 6, consists of a discussion of ageing

techniques for individual species. The third part, Chapter 7, is a general account in the use of different structures for ageing fish" (p. 1). The final chapter (8) is additional selected references on fish ageing and, lastly, two appendices are included, one of which contains convenient lists of abbreviations and the correct spelling of terms used frequently in fisheries reports.

Each chapter is well presented and organized in a way that is easy to find specific information about various aspects of fish ageing techniques. The individual species discussed include lake sturgeon, arctic grayling, cisco, lake whitefish, mountain whitefish, lake trout, bull trout, brook trout, brown trout, cutthroat and golden trout, northern pike, goldeneye and mooneye, yellow perch, walleye and sauger, burbot, suckers, trout-perch, sculpins, cyprinids, and lastly sticklebacks. A variety of structures are recommended for different species, and the separate entries include, wherever possible, concise summaries of the preferred structure, secondary structure, time of annulus formation, distinguishing characteristics and Alberta distribution, general comments, special preparation and storage methods, ageing considerations, and relevant literature references. The preparation techniques of skeletal elements used for fish ageing are given in detail; the structures described include the sagittal otolith, operculum, cleithrum, fin rays and spines, and scales. The methods involved in the removal, storage, preparation (grinding, clearing, sectioning, mounting and viewing), and counting annuli (interpretation) are briefly reviewed where applicable to the

recommended structures chosen to study. The end result is an excellent reference guide to certain fishes native to Alberta, including species also found throughout the other freshwater drainage systems of North America, if not other parts of the world (cf. Scott and Crossman, 1973).

The focus of this manual, as stated in the Introduction "is the accurate determination of the age of fish species which are found in Alberta" (p. 1). To that end, the editors have produced a detailed resource book that is very well constructed (this reviewer likes the fact that the literature references for suggested further readings are located either at the end of every chapter or, in the case of the individual species account, immediately following each separate account). Of special note, the abundant photographs, the high quality colour plates, and illustrations accompanying the text have been reproduced with great clarity. Another pleasant feature is the spiral binding which is handy for this type of "how-to" manual, making it additionally "user-friendly". The reader should be aware, however, of a couple of errata that exist in this edition: the two photographs marked *a* and *b* in Plate 12 (p. 68) are labeled in reverse, and should be switched with each other to fit the captions below; and Plate 13 (p. 71) the two photographs are both labeled *b*- the one on the left (operculum) should be properly identified as *a* to correctly match their respective captions.

Though created for the purpose of fisheries management in Alberta, this publication will be an important reference for archaeologists, in particular to those researchers interested

in faunal remains, or palaeoecology in general, but more specifically, wherever fish ageing is being considered as a method for deriving certain information about the site. It is most relevant to those zooarchaeologists studying subsistence and diet (species identification), time of occupation (seasonality), and biogeography (age growth rates). The manual complements the other standard texts often referenced in the zooarchaeological literature on this subject (e.g., Casteel, 1976), in that it provides "state of the art" information on the current methods employed in the analysis of fish skeletal elements. The earlier literature still continues to be used as textbooks by educational institutions, and is slowly becoming out-dated. From this aspect, the present manual can be a beneficial aid to teaching the techniques of faunal analyses.

Conversely, it is also important that faunal analysts collect data based on the same standards that are used by the associated discipline from which the technique originated, not only to ensure validity and accuracy of the results, but also to enable archaeologists to present data that can be used by researchers other than those in the same field of study. There is an underlying onus on zooarchaeologists to disseminate information and the results of their studies (either by reporting in the appropriate scholarly journals or through conference presentations) not only to their colleagues, but to researchers in other related disciplines. In this manner, archaeology can give back something for which they have borrowed, and, in this particular case, may make significant contributions in

understanding the growth rate of fish in a population (cf. Simonds, in press). To that extent, this book is an essential reference as a source of generally-accepted standards in the collection and reporting of this kind of data. In short, it would be a welcomed addition to the faunal laboratory.

Multidisciplinary approaches to archaeology have become so very commonplace that archaeologists must also be aware of the advances being made in the methods and techniques of these borrowed sciences, in as much as they should be aware of the new archaeological discoveries that are made as a result of use of them. This present contribution from fisheries biologists serves that first requirement very well. It is recommended reading for any researcher considering using the techniques described within, including zooarchaeologists. Although this manual is currently out of print, a revised edition is being published in the near future, and will be available from R.L. & L. Environmental Services Ltd., 17312 - 106 Avenue, Edmonton, Alberta, T5S 1H9, (403) 483-3499

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- Scott, W.B. & Crossman, E.J. 1973. Freshwater Fishes of Canada. Environment Canada, Fisheries and Marine Service, Fisheries Research Board of Canada, Bulletin 184, Ottawa

Simonds, E.C. in press. Fish Remains and Archaeology: A case example from the Forks (DILg-33), Winnipeg. Proceedings of the 33rd Ann. Meeting Manitoba Arch. Soc., Winnipeg 1994.



## ZOOARCHAEOLOGICAL RESEARCHERS: CURRENT RESEARCH INTERESTS AND PUBLICATIONS

*(late arrivals -continued from issue no.7)*

Barrett, James H.  
Department of Archaeology, University  
of Glasgow, Glasgow, Scotland G12  
8QQ

### Research Interests:

Palaeoeconomy, centre-periphery relationships in the Medieval North Atlantic, zooarchaeological quantification, taphonomy, ichthyoarchaeology.

### Publications:

Barrett, J.H. in press. Palaeoeconomic investigations at Robert's Haven, Caithness: Life on the edge from a maritime perspective. In: G. Coles & C. Mills (eds) On the Edge - Human Settlement in Marginal Areas; Proceedings of the annual meeting of the Association for Environmental Archaeology, Edinburgh, Sept. 1992. Edinburgh.

Morris, C.D., Barrett, J.H. and Batey, C.E. 1994. The Viking and Early Settlement Archaeological Research Project. An archaeological research programme and recent results, p.144-158. In: B. Ambrosiani & H. Clarke (eds) The Twelfth Viking Congress: Developments around the Baltic and the North Sea in the Viking Age. Stockholm, The Birka Project.

Barrett, J.H. 1994. Bone weight and the intra-class comparison of fish taxa, p.3-16. In: W. Van Neer (ed) Fish Exploitation in the Past: Proceedings of the 7th meeting of the ICAZ Fish Remains Working Group. Tervuren, Musée Royal de L'Afrique Centrale.

Barrett, J.H. 1993. Fish Bone. In: H. James (ed) The Isle of May Excavations 1992. Glasgow University Archaeological Research Division, Glasgow.

Barrett, J.H. 1993. Robert's Haven. Discovery & Excavation in Scotland 1993:42-43.

Barrett, J.H. 1993. Bone weight, meat yield estimates and cod (*Gadus morhua*): a preliminary study of the weight method. International Journal of Osteoarchaeology 3:1-18.

**Burke, Ariane**

Department of Anthropology, University of Manitoba, Fletcher Argue Bldg., Winnipeg, MB R3T 5V5

Research Interests:

Paleoindian/Yukon and NWT (Bluefish Caves), paleoenvironment, Crimean middle Paleolithic (Staroselje, Kabazi V).

Publications:

Burke, A. in press. Prey movements and settlement patterns during the upper Palaeolithic in southwestern France. British Archaeological Reports, International Series

Burke, A. in press. Seasonality, and mobility of human settlement and subsistence patterns during the upper Palaeolithic in southwestern France. In: P. Rowley-Conwy (ed) Animal Bones, Human Societies. Oxbow Books

Burke, A. in press. Report on the equid teeth from Zwollen. In: R. Schild (ed) The Killing-Fields of Zwollen: A Middle Palaeolithic Hunting Site. Institute of Archaeology and Ethnology, Polish Academy of Sciences, Warsaw

Burke, A. & Castanet, J. in press. Histological observations of cement growth in horse teeth and their applications to archaeology. Journal of Archaeological Science

Burke, A. 1994. Archaeology: Temporal Divisions. In: Encyclopedia Americana Vol. 2, Grolier Inc., Danbury, CT

Burke, A. 1994. Applied skeletochronology: the horse as human prey during the Pleniglacial in southwestern France. In: H. Bricker, G. Peterkin and P. Mellars (eds) Hunting and Animal Exploitation in the Later Palaeolithic and Mesolithic of Eurasia. Archaeological Papers of the American Anthropology Association no.4:145-150

Burke, A. 1994. The killing season: zooarchaeology and seasonality. Canadian Zooarchaeology no.6:2-6

Burke, A. 1994. Contributions to zooarchaeological research. Canadian Zooarchaeology no.6:13-16

Burke, A. 1993. SEM analysis of cementum annuli. Archaeozoologica 2:41-54

Burke, A. 1993. Faunal session: 26th annual meeting of the CAA. Canadian Zooarchaeology no.4:19-20

**LeMoine, Genevieve**  
Department of Sociology and Anthropology, Bowdon College, Brunswick, Maine 04011 USA

Research Interests:  
bone technology, Arctic prehistory.

Publications:

LeMoine, G. 1994. Reviews of: Early Animal Domestication and its Cultural Context. P.J. Crabtree, D. Campana & K. Ryan (eds)-1989 - MASCA Research Papers in Science and Archaeology, Special Supplement to vol.6; and Animal Use and Cultural Change. P.J. Crabtree & K. Ryan (eds) - 1989 - MASCA Research Papers in Science and Archaeology, Special Supplement to vol.8. in Society for Archaeological Science Bulletin 17(2):14-18

LeMoine, G. 1994. Applications of tribology to a study of use wear on bone tools. American Antiquity 59:316-334

LeMoine, G., Helmer, J. and Hanna, D. in press. Human Animal Transformations in Dorset art. In: P.J. Crabtree and K. Ryan (eds) The Symbolic Role of Animals in Archaeology, MASCA Research Papers in Science and Archaeology, Special Supplement to vol.12, University of Pennsylvania, Philadelphia

**Wilson, Michael C.**

Department of Archaeology, Simon  
Fraser University, Burnaby, British  
Columbia, V5A 1S6

**Research Interests:**

Late Quaternary vertebrates, especially  
bison, camel and bighorn sheep;  
Holocene microevolution; faunal  
responses to environmental change;  
analysis of kill-site populations.

**Publications:**

Fedje, D.W., White, J.M., Wilson,  
M.C., Nelson, D.E., Vogel, J.S.  
and Southon, J.R. 1995. The  
Vermillion Lakes Site:  
adaptations and environments in  
the Canadian Rocky Mountains  
during the late Pleistocene and  
early Holocene. *American  
Antiquity* 60(1):81-108

Wilson, M.C. and Davis, L.B. 1995.  
Late Quaternary stratigraphy,  
paleontology, and archaeology of  
the Sheep Rock Spring site  
(24JF292), Jefferson County,  
Montana. *Current Research in  
the Pleistocene* 11:100-102

Wilson, M.C. 1993. How the  
Pleistocene extinctions caused  
Clovis: an essay on event and  
process, cause and effect, p.85-  
92. In: R.W. Jamieson, S. Abonyi  
& N. Miran (eds) *Environment  
and Culture: A fragile  
coexistence. Proceedings of the  
24th Annual Conference of  
Chacmool, the Archaeological  
Association of the University of  
Calgary*

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**RECENT  
PUBLICATIONS/PUBLICATIONS  
RECENTES**  
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Austin, Shaun J. 1994. The Wilcox Lake  
site (AlGu-17): Middle Iroquoian  
exploitation of the Oak Ridges  
Moraine. *Ontario Archaeology*  
58:49-84

Grier, C. & Savelle, J. M. 1994.  
Intrasite spatial patterning and  
Thule Eskimo social organization.  
*Arctic Anthropology* 31(2):95-107

Hanna, Margaret & Gibson, Terry.  
1993. Trespassing into the past: A  
report on the workshop with Cree  
elders held on May 1-3.  
*Saskatchewan Archaeology* 14:2-  
14

Keen, Sharon & Wigen, Becky. 1995.  
Contributions to Northwest Coast  
faunal research: Donald Mitchell.  
*Midden* 27(2):9-10

Kramer, P. 1994. Native Sites in  
Western Canada. *An Altitude  
Super Guide*. Altitude Publishing  
Can. Ltd., Banff/Canmore, 160p.

Melbye, Jerry & Fairgrieve, Scott I.  
1994. A massacre and possible  
canibalism in the Canadian  
Arctic: New evidence from  
Saunaktuk site (NgTn-1). *Arctic  
Anthropology* 31(2):57-77

Mills, Robin O. 1994. Radiocarbon calibration of archaeological dates from the central Gulf of Alaska. *Arctic Anthropology* 31(1):126-149

Mitchell, Don & Donald, Leland. 1994. Nature and culture on the Northwest Coast of North America: The case of the Wakashan salmon resources. In: E.S. Burch & L.J. Ellana (eds) *Key Issues in Hunter-Gatherer Research*, Berg Publishers, Providence, RI

Steffian, Amy F. & Simon, James J.K. 1994. Metabolic stress among prehistoric foragers of the central Alaskan Gulf. *Arctic Anthropology* 31(2):78-94

Yansa, Catherine H. 1995. A postglacial record of vegetative change in southern Saskatchewan. *Saskatchewan Archaeological Society Newsletter* 16(2):38

Yasui, Catherine & Acheson, Steven. 1995. Village "far enough": Evidence of Kwakwaka'wakw settlement on Triangle Island. *Midden* 27(1):7-9



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**FORTHCOMING CONFERENCES/  
 CONFERENCES A VENIR**  
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## 1995

◆ ◆ ◆ CHACMOOL, 28th Annual  
 Conference ◆ ◆ ◆

Theme - "Archaeology into the New Millenium: Public or Perish", University of Calgary, Calgary, AB.

For further information: Dept. of Archaeology, c/o 1995 Conference Committee, 8th Floor, Earth Sciences, University of Calgary, 2500 University Dr. N.W., Calgary, AB, T2N 1N4. tel. (403) 220-7131; fax (403) 282-9567, email: 13042@ucdasm1.admin.ucalgary.ca

## 1996

◆ ◆ CANADIAN ARCHAEOLOGY  
 ASSOCIATION, 29th Annual  
 Conference, Halifax, NS ◆ ◆ ◆

For further information: Conference Coordinator: Dr. Stephen Davis, Dept. Anthropology, St. Mary's University, Halifax, NS, B3J 3C3 tel. (902) 420-5631, fax (902) 420-5119 e-mail: sdavis@husky1.stmarys.ca

Program coordinator: Rob Ferguson, Dept. Canadian Heritage, Historic Properties, Upper Water St., Halifax, NS, B3J 1S9 tel. (902) 426-9509; fax (902) 426-7012; e-mail ferguson@pksaro.dots.doe.ca

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**REQUESTS, EXCHANGES, NOTICES/  
 DEMANDES, ECHANGES, AVIS**  
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**!!!! CALL FOR PAPERS !!!!**

**Special Session  
 in honour of Dr Howard Savage**

Fran Stewart is organising an all-day session at the 1996 CAA in honour of Dr Howard Savage who retired last year from teaching at the University of Toronto. Students and/or friends of Dr Savage who would like to present a zooarchaeological paper at this session should send titles and abstracts to Fran, at one of the following addresses:

Frances Stewart,  
 Dept. of Anthropology,  
 Univ. New Brunswick,  
 P.O. Box 4400, Fredericton, NB  
 E3B 5A3

**OR:**

by email: [fls@unb.ca](mailto:fls@unb.ca)

Titles are due to Fran by November 20, 1995 and abstracts need to be in to her by January 8, 1996. The CAA will be held in Halifax on May 2 to 5, 1996.

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**APZO RECOMMENDATIONS FOR
 STAGE 4 GUIDELINES PUBLISHED**

In early October, the Association of Professional Zooarchaeologists of Ontario (APZO) submitted to the Ministry of Citizenship, Culture and Recreation its recommendations for changes, relative to faunal materials, to the Ontario government's proposed Stage 4 guidelines. The draft guidelines were completed by the Task Force on Self Regulation in 1992 and published in the Ontario Archaeological Society's newsletter *ARCH NOTES* in its issue of May/June 1992.

These recommendations, which are the result of a six-month study by APZO members, address the appropriate recovery, analysis, reporting and curation of zooarchaeological remains. They appear in the current issue of *ARCH NOTES* (Sept/Oct, issue 95-5), with a view to encouraging Ontario's greater archaeological community to reflect and comment on the APZO proposals.

If any CZ reader wishes to study the new APZO recommendations, but does not have ready access to the relevant issue of *ARCH NOTES*, he/she is invited to contact APZO and request a copy.

Contact Suzanne Needs-Howarth via e-mail: 75304.2724@compuserve.com

or write to: Stephen Cox Thomas,
 78 1/2 Spruce St, Apt.30,
 Toronto, Ontario, M5A 3W3.

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