List of Abstracts:
Graduate Students Lithics Symposium

**BETWEEN A ROCK AND A HARD PLACE**
**FEBRUARY 24-25th, 2010**
**TORONTO, ONTARIO, CANADA**
**HOSTED BY THE LITHICS AND TECHNOLOGY INTEREST GROUP AND THE ARCHAEOLOGY CENTRE**

**AUTHOR:** Peter Bikoulis (University of Toronto) peter.bikoulis@utoronto.ca
**TITLE:** On the chipped stone at Kiran Kayasi and prehistoric settlement in the Göksu Valley of southern Anatolia: prospect, program, and potential
**ABSTRACT:** In this presentation, I provide an introduction and background to proposed research of a lithic scatter found in the summer of 2005 at the rock shelter of Kran Kayasi (F0619) in the Göksu Valley in south-central Turkey. Much of the information in this presentation comes from a review of field notes and the project catalogue of the Göksu Archaeological Project (GAP), which investigated the upper Göksu Valley from 2001 to 2006. This is combined with a review of previous archaeological research of prehistoric occupation in the Göksu Valley since the 1950s in an attempt to better understand prehistoric settlement in the valley. The assemblage consists of over 1000 pieces, with the majority being initially classifiable as débitage. However, a few formal tools are identifiable; it is hoped that analysis in the summer of 2010 will identify diagnostic pieces from which the assemblage can be dated. The primary material of manufacture was Obsidian, although a number of pieces of chert were also recovered. In addition to analyzing the assemblage, the possibility of conducting Energy Dispersive X-ray Fluorescence (ED-XRF) analysis is raised in the context of obsidian sourcing in Anatolia and late prehistoric exchange patterns. I conclude by discussing the potential this assemblage has for increasing our understanding of the prehistoric economy and settlement patterns of the Göksu Valley and south-central Anatolia.

**AUTHOR:** Nicolas Cadieux (McGill University) nicolas.cadieux2@mail.mcgill.ca
**TITLE:** Size matters!
**ABSTRACT:** Lithic technology is a reductive process by nature. Flakes cannot be bigger than the objective piece they are produced from and they will get...
progressively smaller as the reduction sequence advances. It is therefore not difficult to imagine why flake size is one of the oldest and most widely used variables in débitage analysis. Flake size can help us understand the objective piece, the flaking methods and tools, the chaîne opératoire, the fall-off curves and the distribution networks.

Yet, since perfectly square or round flakes are rather difficult to find, a true and precise measure of flake size is notoriously challenging to produce. Archaeologists have thus resorted to the use of a number of different variables (such as flake length, width, thickness and weight) and a number of different methods (such as progressive sifting, the use of callipers or surface grids with masks of varying shapes and predetermined size classes) in order to measure flake size (Andrefsky 1998). Since the end results are produced from highly correlated variables, archeologists tend to minimize the resulting inconsistencies. By using an optical scanner and a method developed in 2005 by this author, one can now effectively determine the precise size of a flake. Using data from a pyroclastic distribution network found on the Ottawa and St-Lawrence rivers, we will see how this method is highly compatible with older methods while providing more flexibility and precision to the researcher by removing the constraints of predetermined size classes.

AUTHOR: Lilian Dogiama (McMaster University) dogiamte@mcmaster.ca
TITLE: Seasonal settlements during the Early Neolithic in Northern Greece: the case of the lithics assemblage from Mikri Volvi
ABSTRACT: In this paper I examine the evidence for seasonality in the Early Neolithic of northern Greece on the example of lithics from the site of Mikri Volvi. This site is located near the Volvi Lake, and dates to the mid 6th millennium BC. I studied the assemblage in the course of research for my MA thesis at the University of Thessaloniki, Greece.

The prevailing settlement type in the Early Neolithic of the area is represented by the long-lived year-round occupied tells. The lithics assemblage, together with the architectural remains, paints a different picture for Mikri Volvi. It seems that in this case a small group of people visited the site recurrently for a limited time period. They were bringing their own curated flint sickles and blades, and when necessary, knapped the local quartz in situ to manufacture additional blades. It is possible that their seasonal visits to the site were linked to the procurement of resources from the nearby lake. That Mikri Volvi is a flat extended site that was occupied seasonally is suggested by the differences in curated and expedient industries, the variability of largely non-local raw materials, and the lack of permanent dwellings.

If this interpretation is correct, it will help us understand a new dimension of the Neolithic life hitherto assumed to be sedentary and largely immobile. As a
consequence, the view of the northern Greek Early Neolithic created in the 1960s, which accounted only for ‘ancestral’ tell sites inhabited for multiple generations, needs to be revised.

AUTHOR: Jordan Downey (University of Western Ontario)  
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TITLE: Working With Expedient Lithic Technologies in the Northern Highlands of Peru  
ABSTRACT: Archaeologists studying complex societies have largely overlooked the lithic technologies of these societies, despite the fact that lithic artifacts remained common in many. In part, this is because lithic technologies often become increasingly expedient and informal in societies where hunting is no longer a major economic activity. This is evident in the Andean region, where the few lithic studies conducted from ceramic-bearing contexts suggest that informal lithic technologies dominate these contexts. But what can we do with informal lithic technologies? Is it worthwhile to study them? I explored both of these questions by analyzing the lithic assemblage from four sites associated with the Oracle of Catequil, a major ceremonial centre located near San José de Porcón in the northern highlands of Peru. The main shrine of Namanchugo was in use from ca. 400-1555 C.E., and the associated sites of Chulite, Chuquicanra and Cerro Icchal were in use for shorter amounts of time during this same period. These four sites contained a large assemblage of lithic artifacts, and I analyzed a sample of these, focusing specifically on chipped lithic cores, tools and débitage. Attribute analysis showed that the assemblage was produced in a very informal, expedient manner, and use-wear analysis was conducted on the unmodified flake tools that made up the vast majority of the tool assemblage. By studying both production and function, I show that important social and economic information can be discerned from studying the chipped lithic assemblage, and I highlight the importance of studying informal lithic technologies.

AUTHOR: Hilary Duke (University of Toronto) hilary.duke@utoronto.ca  
TITLE: Independent Research in Cognitive Archaeology: A Pilot Study in Social Learning Scenarios between an Expert and a Novice for Knapping Techniques  
ABSTRACT: My research in cognitive archaeology combines concepts and methods from archaeology with those of psychological sciences. Stout et al. (2008) investigated functional brain activation in experts during experimental Early Stone Age toolmaking using the simple Oldowan and more complex Acheulean techniques. My research expands that of Stout et al. (2008) by investigating novice and expert stone tool knappers in a social learning environment where the expert teaches the novice a specific technique. The current study served as a pilot project for future research examining social learning
scenarios between expert and novice knappers. The scenarios were video-recorded and conducted under two conditions, one with the use of spoken language and one without. The goal of the video analysis was to construct a coding scheme for the types of gestures used across conditions, using categories outlined by previous language and gesture research as a guideline (McNiell 2005). The data collected will quantify the frequency and types of gestures and verbal instructions in the scenarios. The data will address the question of whether the types and frequencies of gestures change with the use and absence of speech.

AUTHOR: Lucille Harris (University of Toronto) lucille.harris@utoronto.ca
TITLE: Edge Angle and Functional Diversity in an Expedient Flake Tool Industry from Interior British Columbia: Typological Considerations
ABSTRACT: Variability in winter housepit economic activities in Interior British Columbia is commonly established through proportional differences in tool types using a morpho-functional classification system. In this paper I argue morpho-functional typologies are inappropriate for expedient flake tools because many of the defined types lack behavioral significance, because they force analysts into functional interpretations often based on arbitrary or unproven rules, and because they have the potential to significantly skew quantification and interpretation of the assemblages. Classification of individual worked edges according to edge angle and use damage is suggested as a more accurate and potentially interpretation-free approach.

AUTHOR: Heather Kendall (Simon Fraser University) hkendall@sfu.ca
TITLE: Chert characterization and sourcing at ST 109, Keatley Creek in Interior British Columbia
ABSTRACT: Trade networks remain one of the most effective ways to establish cross cultural connections within a region. This research attempts to determine the nature of trade within the British Columbian Interior Plateau by analysing chert debitage excavated from Structure 109 at Keatley Creek to reveal its archaeological and geological origins/quarries. I am presenting the results of my lithic sourcing study which utilized petrographic and geochemical methods to characterize and correlate chert and chalcedony artifacts to their geologic sources.

AUTHOR: Darryl J. Kirsch and Rudy Reimer/Yumks (Simon Fraser University) djkirsch@sfu.ca
TITLE: Methods for analysis of ground artifacts and debitage from the Central coast of British Columbia
ABSTRACT: While the central Northwest Coast is more well known for the extensively excavated and analyzed Namu site (ElSx 1), the underreported Kwatna locality of archaeological sites (FaSu 1,2,10) offers other insights to the
region’s archaeological record for the past 5000 years. This is especially true for the abundant and diverse assemblage of woodworking implements present at these sites. This woodworking industry represents an integral collection of specialized equipment that will be useful to understanding long term cultural traditions and how they are linked to the renowned woodworking traditions of the Northwest Coast. Furthermore, I discuss the links between this specialized woodworking and lithic raw material acquisition, use and discard.

Initial analyses of a sizeable proportion of the ground stone assemblage, consisting of adze blades and associated débitage, found that adzes were used almost exclusively for woodworking. Additionally, X-ray Fluorescence (XRF) analysis aimed at understanding processes of tool production and function was done on a large sample of the collection. The results of these analyses indicate that a surprisingly narrow range of raw materials have failed to be recognized by traditional visual assessments made by archaeologists. This work is particularly important for understanding methods of use and manufacture of ground stone tool technology, in terms of variation in technological complexity on the Central Northwest Coast, and beyond.

AUTHOR: Petr Kurzybov (University of Alberta) kurzibov@ualberta.ca
TITLE: Multidimensional approach to lithic analysis
ABSTRACT: In contemporary research lithic analysts often have to combine various approaches and methods from different fields to achieve goals. The combination of multiple vectors of research provides more refined and detailed information about the lithics and consequently, about the behaviour of their producers. Moreover, the results of a few independent methods can be used for mutual verification.

Such an approach is best described as multidimensional or comprehensive and prevails in the works of scholars from the Saint-Petersburg experimental-use-wear laboratory (Poplevko, 2007; Skakun, 2008). It includes the following methods: typological, technological, use-wear, experimental, and spatial analysis. The combined use of these tools maximizes the information about (1) the techniques employed in producing stone implements, (2) technologically important characteristics of lithics, (3) reduction sequence and strategy, (4) tool use, and (5) the internal structure of archaeological sites. This methodological framework is universal and can be applied widely for studying lithic assemblages in various temporal and spatial contexts.

AUTHOR: David E. Leslie (University of Connecticut)
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TITLE: Formal Variation in Lithic Projectile Armatures
ABSTRACT: Lithic projectile armatures represent a significant innovation over thrust spears in the subsistence strategies of hominins. Previous researchers have disagreed over the timing of the appearance of projectile weapons in the archaeological record (Brooks 2006; Shea 2006). To discover when projectile technology first appears in the Levant, I have compared tip cross-sectional areas, weights, and tip penetrating angles (three variables useful for discriminating between projectile and thrusting weapons) of pointed Blades, Levallois points, and Mousterian points with analogs from known and suspected chipped stone projectile points. Results indicate that pointed Blades from Tabun and Skhul caves are statistically indistinguishable from other suspected projectile point types. Levallois and Mousterian points from Tabun and Skhul are also statistically indistinguishable from suspected projectile types when the lower halves of the populations are compared. Consequently, I conclude that points from Tabun and Skhul caves fall within the known and suspected range of variation of projectile point morphology.

AUTHOR: Danielle Macdonald (University of Toronto)
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TITLE: Interpreting variability through multiple methodologies: form, function and technology of microliths

ABSTRACT: The reason for material culture’s morphological variability is one of the most fundamental debates in archaeological studies. These debates factor strongly into Levantine Epipalaeolithic research, where the morphological variability of microlithic tools has been interpreted to represent distinct cultural or ethnic communities. Understanding the functional and technological aspects of microlith variability will greatly contribute to our understanding of how microlithic tools act as both functional artifacts and carriers of symbolic loads. My research addresses this question through the use of multiple methodologies, including analysis of retouching sequences, use-wear analysis, morphometrics, and typological studies. This research seeks to gain understanding of the transformative processes that are undertaken by tools over their life-history, addressing the diversity in Middle Epipalaeolithic material culture.

AUTHOR: Monica Maika (University of Western Ontario) mmaika2@uwo.ca
TITLE: Gravers: A study of Paleo-Indian stone tools

ABSTRACT: Paleo-Indians represent the first well-documented group in the Great Lakes region. In order to answer questions of broader anthropological significance, such as how Paleo-Indians successfully colonized new areas, their actions and lifeways must be documented and understood. As stone tools are all that is usually preserved on these ancient sites, it is important to examine stone tool assemblages. To date, little use-wear analysis has been conducted on gravers,
which are diagnostic of the Paleo-Indian time period. My research will analyze, via use-wear and morphological studies, an Ontario sample of gravers recovered from Paleo-Indian (9500-7500BC) sites. The graver morphology will be examined, as will any microscopic traces of use-wear. An experimental approach will be then be taken where replicas of archaeological tools will be made and use-wear created will be examined following their use. The use-wear found on the experimental replicas will then be compared to that found on the archaeological specimens. From this experiment, questions regarding function of the tools, such as whether they were used in everyday actions such as hideworking, or whether they were used for ideational purposes, such as tattooing, can be examined. It is hoped that by examining the gravers both macro and microscopically, similarities and differences in form and function across and within sites will become apparent. This use-wear study will give insight into poorly understood tools and everyday Paleo-Indian actions, and will enable archaeologists to look beyond the traditional focus on the age of sites and the hunting activities associated with them.

AUTHOR: Andrew Riddle (University of Toronto) andrew.riddle@utoronto.ca
TITLE: Characterizing Palaeo-Eskimo lithic technological change in the Central Canadian Arctic - What do we mean and what does it mean?
ABSTRACT: Technological developments during the Palaeo-Eskimo period in the North American Arctic are often taken as markers of broader economic and social changes in the lifeways of ancient Northern populations. Indeed, differences in the frequency and form of particular types of artifacts in site assemblages are often used to distinguish between temporally-distinct cultural phases or traditions (i.e. Pre-Dorset, Middle Dorset, etc.); however, at present there is little consensus on what is meant by change in the Palaeo-Eskimo technological context. In this paper I briefly explore the nature of lithic technological change in southeastern Victoria Island, Nunavut, from the perspective of implement production and rejuvenation processes. I argue that many of the changes in lithic tool form can be explained by changes to fundamental production techniques, and in particular the incorporation of grinding as a surface-working method. Along this line of inquiry, interaction network models provide a means to explain technological change within the Palaeo-Eskimo social context in general, and on Victoria Island in particular.

AUTHOR: Benjamin J. Schoville (Arizona State University) and Kyle S. Brown (University of Cape Town) Benjamin.Schoville@asu.edu
TITLE: A GIS Approach to Lithic Edge Damage Documentation: Facilitating Inter- Assemblage, Experiment, and Researcher Comparisons
ABSTRACT: Drawing behavioral inferences from macroscopic edge damage observations on lithic assemblages relies on linking observed damage patterns to behavioral processes identified during experimentation. Such methods have proven useful. However, critics frequently cite equifinality between different processes and wear traces on individual artifacts as well as inconsistent inter-observer agreement as problems with a ‘low-powered approach’ to lithic use-wear. One potential source of information that has received less attention is the patterns of edge damage detectable at the assemblage scale. Such patterns are only discernable by quantification of the collective distribution and frequency of edge damage on individual specimens. Here we use GIS to digitize and spatially reference artifacts to standardize and quantify edge damage. We applied this method to an assemblage of Middle Stone Age convergent flakes from Pinnacle Point Cave 13B, South Africa (165 - 90 ka) and a series of experimental flakes recreated for several tasks including use in a calibrated crossbow experiment. Assemblage results indicate that archaeological patterns of edge damage are unlikely to have a taphonomic origin. Moreover, the patterning does not appear to result from use as hafted spear armatures. Our results demonstrate the statistical and interpretive power gained by assemblage analyses compared to individual artifacts. The additional benefit of including microwear and residue analysis using a single cohesive GIS recording framework will enable rapid dissemination of results between analysts and create a record of experimental and archaeological wear-traces available to other researchers.

AUTHOR: Nicholas Waber (University of Victoria) nwaber@gmail.com
TITLE: An Experimental Approach to Identifying a Potential Diagnostic Indicator of Microblades Produced from Bifacial Wedge-shaped Cores
ABSTRACT: This paper proposes a diagnostic method for distinguishing microblades produced in bifacial traditions, in assemblages where cores are absent. The efficiency of microblade technology is a direct result of core management practices. Through deliberate preparation and strategic maintenance microcore yields may be optimized, producing cumulative cutting edge lengths far in excess of what could be manufactured from the same raw material through bifacial reduction methods. The specific core preparation and rejuvenation techniques vary depending on the core type. Wedge-shaped bifacially prepared cores and conical or tabular cores are among the most abundant core types recovered from microblade sites on the Northwest Coast. However, many assemblages do not include cores, preventing the microblade component from being identified with one core tradition or another. I propose that semi-crested blades produced at the lateral margins of a core’s fluted surface may be diagnostic of bifacial core production. Like the ski spall and lamé a crête, these blades bear flake scars from the initial core shaping and may be used to identify an
assemblage with bifacial core production. However, unlike these telltale flakes, the semi-crested blades are usable tools and thus more likely to be curated, hafted and deposited at a variety of sites, rather than discarded at the point of production. I intend to use a replication experiment to demonstrate the diagnostic potential of these semi-crested microblades.

AUTHOR: Matthew Walls (University of Toronto) matthew.walls@utoronto.ca
TITLE: Paleocarpentry in the Eastern Arctic: An Exploration of the Relationship between Stone Tools and Wood Selection in Kayak Construction
ABSTRACT: Because stone tools are the only artifact class preserved in most hunter-gatherer contexts, they are often conceived as being representative of ‘stone-age’ technology as a whole. However, tools designed to manipulate organic materials can be traced as far back as the Earlier Stone Age implying a long-standing composite position of lithics in broader technical systems (see Tomášková 2005). Particularly in the case of carpentry, the archaeological record offers little evidence for the precise techniques which must govern, in part, the function of certain tool types. This paper examines the construction sequence of Eastern Arctic Kayaks, paying specific attention to the carpentry skills that are required at each stage. It will be demonstrated that these techniques formed a special relationship between stone tools and wood which was the basis of a trade economy of certain wood types.

AUTHOR: Jayne Wilkins (University of Toronto) jayne.wilkins@utoronto.ca
TITLE: (Re)-examining the Fauresmith Collection Housed at the McGregor Museum, South Africa: Identifying and Overcoming the Challenges
ABSTRACT: The Fauresmith Industry of South Africa is characterized by small handaxes, prepared cores, blades, and is stratified between Acheulean and Middle Stone Age assemblages. The Fauresmith is a commonly referred to entity, but very little has been formally reported or published on the numerous Fauresmith-bearing sites that were excavated through the 1970s to 1990s. Most of these assemblages now exist as collections in South African museums, still awaiting thorough analysis and description. For my dissertation research, I will analyze a rich Fauresmith assemblage housed at the McGregor Museum that was excavated from the site of Kathu Pan in the Northern Cape Province of South Africa. This paper will focus on the role of collections research in the discipline of archaeology and the challenges imposed by research history and the museum environment. I suggest that archaeology has an ethical obligation to re-examine lithic collections as the discipline changes and to be actively engaged in research-oriented curation practices.
AUTHOR: Emma Yasui (University of Toronto) emma.yasui@utoronto.ca
TITLE: What the Stones Can Tell Us: A Lithic Analysis of Materials from Yagi and Hamanasuno, Hokkaido, Japan
ABSTRACT: Located on the Oshima Peninsula in southwestern Hokkaido, the Yagi and Hamanasuno sites have been excavated and studied since the 1970s by several archaeology teams. As a result, a number of publications exist for these sites, including faunal and paleoethnobotanical analyses, but the collected materials have also become scattered. Toronto is home to a large portion of the recovered ceramic and lithic materials, but these have yet to be thoroughly examined. This study wishes to gather the available information about the two Early Jomon (~5,000 – 3,000 BC) sites, and to begin an initial analysis of the lithic aspect of the collection. With a base to work from, it will then be possible to determine what the lithic remains can add to the archaeological picture of the Early Jomon in northern Japan.