



**NEWSLETTER OF THE LONDON CHAPTER,
ONTARIO ARCHAEOLOGICAL SOCIETY**

*c/o Museum of Ontario Archaeology
1600 Attawandaron Road, London, ON N6G 3M6*



February & March 2015

15-02 & 15-03

The next London Chapter meeting will be held on **Thursday, September 8, 2016** and will feature **Kyle Forsythe** of **Archaeological Services Inc.**, Toronto talking about his research on a unique assemblage of purposefully broken stone artifacts from a 5000 year old **Middle Archaic site** in southcentral Ontario. The title of his presentation is: **Caching and Killing: The Mount Albert Story**. See you there!!

Doors will open at the usual time 7:30 PM with the talk scheduled for 8 PM. However, note that **as of our October meeting we will be moving the start of the meeting earlier to 7:30 PM with doors opening at 7 PM** in response to member requests.

Speaker's Night is held the 2nd Thursday of each month (January to April and September to December) at the Museum of Ontario Archaeology, 1600 Attawandaron Road, near the corner of Wonderland & Fanshawe Park Road, in the northwest part of the city. The meeting starts at 8:00 pm. Doors open at 7:30 PM and as usual there will be free juice and cookies!

Chapter Executive

President

Nancy Van Sas
nancy.vansas@gmail.com

Treasurer

Jim Keron
jkeron5461@rogers.com

Directors

Darryl Dann (darryl.dann@sympatico.ca)
Christopher Ellis
Christopher Watts

Vice-President

Darcy Fallon
32 Pleasant Ave., Delaware ON N0L 1E0

Editors

Christopher Ellis (519-858-9852)
cjellis@uwo.ca
Christine Dodd (519-434-8853)
drpoulton@rogers.com
Christopher Watts
c3watts@uwaterloo.ca

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A Birdstone from the Lower Ausable Valley

by Darryl Dann

INTRODUCTION

The date was Wednesday, May 30, 2013 and, as agreed, our volunteer field crew of five met up at the site which is located in a farm field within the Ausable River drainage approximately 65 km northwest of London. The field had been tilled and planted and although recent rains had thoroughly 'washed' any artifacts in the field thereby providing perfect conditions for a surface survey, it was also quite obvious that the soybean crop would soon be sprouting. After checking the field we all concurred that we would do no harm walking the field but we also agreed that it would have to be our last day on the site until after the crops had been harvested.

Our crew shared two goals that day: the first was to extend the area that had already been mapped through extensive geophysical surveys and the second was to complete a controlled surface survey of the entire study area, 'shooting in' all diagnostic artifacts with a total station. Jim Keron was our field director and total station wizard. The rest of our team included Ed Eastaugh, Lab Manager (and Geophys maestro) University of Western Ontario, who directed and completed the magnetometer surveys; Lisa Hodgetts, Professor of Archaeology, University of Western Ontario; Becca Parry, undergraduate student(at that time), University of Western Ontario; and me, an avocational volunteer. Ed needed two people to help complete the magnetometer surveys, so the other four of us rotated throughout the day... two working with Ed and the other two completing the surface survey marking all diagnostics, to be shot in and recovered at the end of the day.

The conditions were near perfect; comfortable temperature, little wind and excellent visibility thanks to the condition of the field and a slightly overcast sky that eliminated any shadows. Ed was thrilled with the new gradiometer that he was using which, in his opinion, was nearly twice as fast as the one he had used for previous surveys. Once certain that he was "metal free", Ed tirelessly laid out 20m by 20m (400m²) grid blocks and then completed seemingly endless parallel traverses spaced 0.25m apart, as pairs of us hurried to reset the guide line for each of his subsequent passes. It is a somewhat tedious and exacting process but we accomplished more than I think even Ed had anticipated. Meanwhile the survey of the rest of the site was equally successful with everybody making interesting finds throughout the day... even Ed, once we let him put the gradiometer down long enough to eat his lunch. Ed and Lisa left the site mid-afternoon so they would be back home when their children arrived home from school. By the time they left our small crew had already identified and marked more than 100 diagnostic artifacts and mapped four 400m² blocks with the gradiometer.

Jim, Becca and I set about "shooting in" and recovering the artifacts and by the time we had finished I was, quite frankly, ready to call it a day. Jim, however, had something else in mind. Since we were not going to be able to get back on the site again for some time... and since we were already on site... and it wouldn't get dark for hours... and we really hadn't had an opportunity to methodically survey a small area end of the site, Jim suggested, "Let's go just a little further". Becca was thrilled with the idea and not about to admit, that I was olde and tuckered, I grudgingly agreed as well. We each grabbed some flags and off we went. To this day, Jim reminds me, at every opportunity that if he had not shamed me into continuing I never would have experienced my once in a lifetime find. Shortly after we began our extended survey, seeing a small shape that did not look 'natural' protruding from the soil, I reached down and gently wiggled it free. Uttering an awestruck, "Jim... Becca... take a look at this!" I held the object up for them to see. The small, triangular, unassuming shape that had caught my eye proved to be the very tip of the tail of a

beautiful intact birdstone ... which after my long-winded lead in, I now (finally) introduce to you as the subject of this article (Figure 1) and hereafter, referred to as the 'Ausable birdstone'.



Figure 1: Darryl Dann with Ausable Birdstone Find.

Previously, having only been acquainted with birdstones through museum displays and academic articles I was painfully aware that I actually knew very little about them. After consulting with Dr. Google I was able to glean some generic information about them. I learned that birdstones are quite rare; that they are found in eastern North America predominately near the Great Lakes; that they are considered by many to be art treasures of prehistoric North America and as such are much sought after by collectors; and that there are an abundance of theories but not much consensus about their function or use.

A few days later, upon his return from a well-deserved holiday, my long time mentor Chris Ellis, under whose project the Ausable birdstone had been recovered, directed me to some paths of greater enlightenment. He very generously loaned me his copy of the book: *Birdstones of the North American Indian* (Townsend 1959). This work is an amazing 700+ page compendium that offers a wealth of information about birdstones, explores every aspect of study related with these unusual effigies and contains photographs of hundreds of them. After months of pouring over the 'Townsend tome' I began to investigate some of the other, more recent, articles about birdstones. With each book or article that I read, about these enigmatic stone effigies, my interest is even further piqued... with new thoughts and questions coming to mind.

So what are birdstones? What do we know about them? Peter Timmins summed it up quite nicely, "Birdstones are beautiful, small, polished stone sculptures that are a part of a poorly understood artistic tradition that flourished... between 1500 and 300 B.C." (Timmins 1989). As is readily apparent from the name, birdstones are small effigies or sculptures made from stone, usually banded slate or porphyry. Birdstones that are made on slate, banded or plain, are the most common. This preference is probably because slate is attractive and relatively soft making it easy to work with, drill, polish to a fine finish and yet is still quite durable. Porphyry is a harder igneous rock consisting of large colourful crystal inclusions which make it too, quite attractive. Both slate and porphyry, having been transported glacially from the Canadian Shield and deposited throughout the

Great Lakes region, would have been readily available and accessible along waterways, large and small, throughout this area.

Birdstones are most often abstract in shape and beautifully symmetrical. Based on the study of some unfinished examples that have been found, evidently the stone selected was initially chipped or pecked to create a rough approximation of the desired form and then further refined, smoothed and polished using other stones and sand as abrasives (Figure 2). Although in the majority of cases the stone has clearly been sculpted in the shape of a bird, some specimens are quite clearly characterizations of other animals or are so highly stylized that they bear little resemblance to any specific animal (e.g. Figure 3b). There are however, two commonalities which are generally shared by the specimens that are clearly bird-shaped. First, they are all shaped as a bird that is either ‘nesting’ or ‘settled’ on water and second, the wings of the bird (one of the most prominent features of live birds) are not represented on the sculptures.



Figure 2: Unfinished Birdstone. Museum of Ontario Archaeology Collections.

Almost invariably, the usual ‘finished’ birdstone has tapered holes “drilled at each end of the body, near the base. These intersect with similar holes drilled from the base, presumably for suspension or functional attachment” (Donaldson and Wortner 1995). While differing hypotheses abound about whether birdstones primarily served a functional or spiritual purpose, there are some things on which most everyone will agree: they are beautiful, intriguing, enigmatic examples of some of the finest groundstone lithic craftsmanship in the archaeological record of the Great Lakes region.

I have twice now in this article associated birdstones with the Great Lakes region. One of the difficulties we face when trying to accurately determine an accurate distribution pattern for birdstones is that all too often the provenience of the recovered specimen is, at best, unclear as a result of the actual findspot of the birdstone recovery being based on poorly documented or oral history; lost through the piece being traded, sold, gifted and re-gifted; or even with the location of the find being falsified to prevent other collectors from searching the same area. Based on his research and countless interactions with collectors and scholars, Townsend (1959) determined that birdstones were distributed over a wide area of the northeastern United States (east of the Mississippi) and the southern part of several provinces in Canada. His map of ‘The Birdstone Area’ uses an “outermost boundary” to identify an extensive area that includes 25 different states and 4 Canadian provinces. It further highlights much smaller “areas of heaviest concentration in which 85 per cent of the birdstones have been found”. These areas include parts of only 5 different states and 1 province (Townsend 1959: Plate 97).

After reviewing Townsend’s data and incorporating information from more recent articles I accept that Townsend’s outermost boundary was then, and probably still, is reasonably accurate although the lower Ausable area is just at the edge of his 85% concentration of these items (see Figure 4). However, I do wonder if the birdstone tradition isn’t more directly related to the Great Lakes and their connected waterways than generally accepted. The areas of heaviest concentration (90% using Townsend’s own data) of birdstone finds occur in Michigan, Ohio, New York, Pennsylvania, Indiana, Illinois, Wisconsin and southern Ontario, all of which are directly adjacent to one or more of the Great Lakes (Figure 4).



Figure 4: Eyeless Bar-Type (A) and Pop-Eyed Expanded Body (B) Birdstones on Banded Slate. Museum of Ontario Archaeology Collections. Note transverse ridges/feet on B.

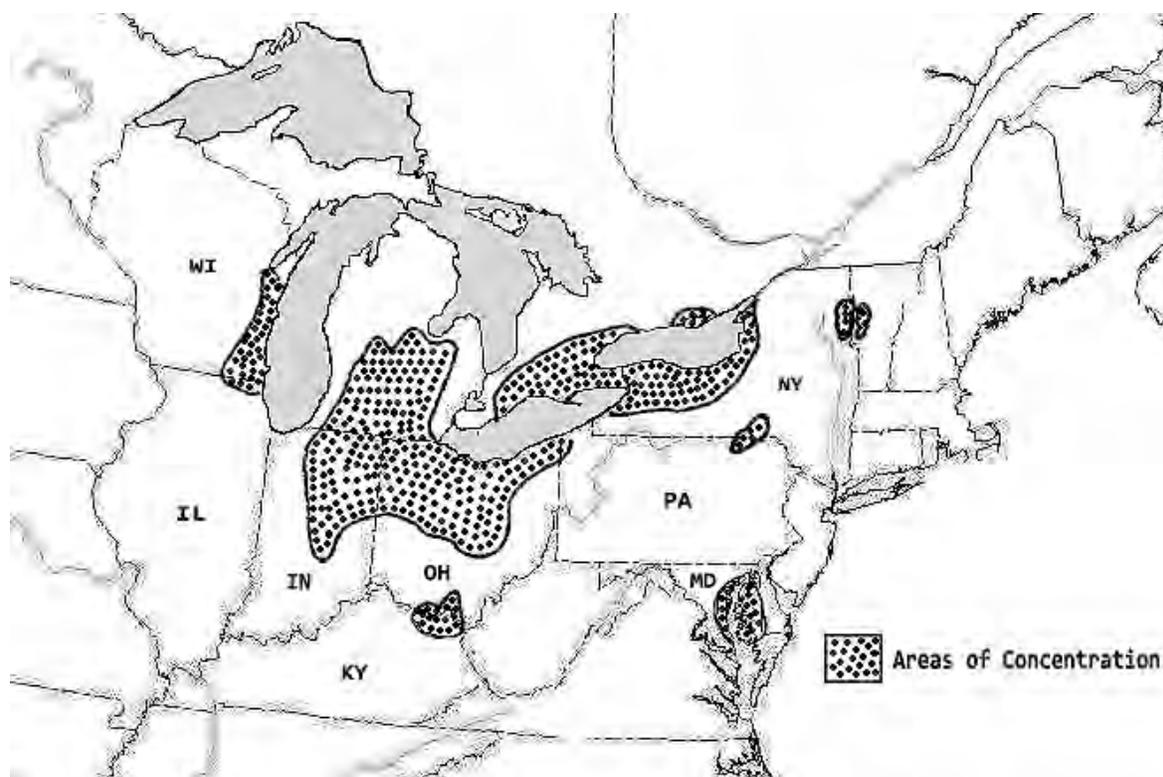


Figure 5: Known Concentration of Birdstones. Redrawn after Townsend 1959: Plate 97. Note how the lower Ausable near the southeastern Huron basin is marginal to the area of concentration adjacent to Lake Huron although many finds of such items are known in the area in private hands (Chris Ellis: personal communication).

There is little debate about the time periods when birdstones were created. While, as mentioned earlier, there are examples that are so stylized that they resemble no recognizable life form, it is generally accepted that there are two quite distinct birdstone forms. The earlier “bar” type birdstones which have no eyes, a narrow, non-expanding bar shaped body, and an angular tail, are associated with the Glacial Kame/Hind complexes of the Terminal Archaic time period (1100-950 B.C.; Figure 3A) based on the few documented in a dated context (e.g., Donaldson and Wortner

1995). The later more stylized “pop-eye” type that have dramatic, projecting eyes, an expanding body, flattened or “fan” tails (and are less “bird-like”; Figure 3B), are associated with the Meadowood Complex of the Early Woodland time period (950- 400 B.C.; e.g., Ritchie 1980:Plate 60-16). In Ontario...“there is no doubt that bar type eyeless birdstones occur primarily or exclusively in Glacial Kame [earlier] contexts and that “Pop-eye” style birdstones are primarily or exclusively associated with Meadowood [later] components in southwestern Ontario. These data again suggest a continuous transition in artifact form between 1000 and 500 B.P.” (Spence and Fox 1986:12). Spence, Pihl and Murphy (1990) further postulate that “Meadowood probably evolved directly from the Glacial Kame complex.” One of the traits that led them to this conclusion “is the birdstone, differing primarily in the addition of protuberant eyes on the Meadowood specimens.” It is also generally accepted that “It seems relatively certain that the production and usage of the birdstone had ended completely before Late Woodland times.” (500-1300 A.D.) (Townsend 1959).

THE AUSABLE BIRDSTONE

With the above information in mind let’s take time now and to study the Ausable birdstone more closely (Figure 6). One of the first things that stands out about the Ausable birdstone is that, although it was discovered in a freshly ploughed field, it remains in remarkably good condition, with no plough scars or other visible damage. The entire surface, which was finely smoothed and polished by its maker, is now quite evenly and beautifully patinated. It is made on brown and black banded slate and its creator used the banding very effectively to accentuate the bird-like shape and features, especially the eyes. This observation applies to both sides, in spite of very different patterns in the banding. Every time I look at this piece I am reminded that the maker was not only a very skilled lithic craftsman but was also blessed with the eyes of an artist.

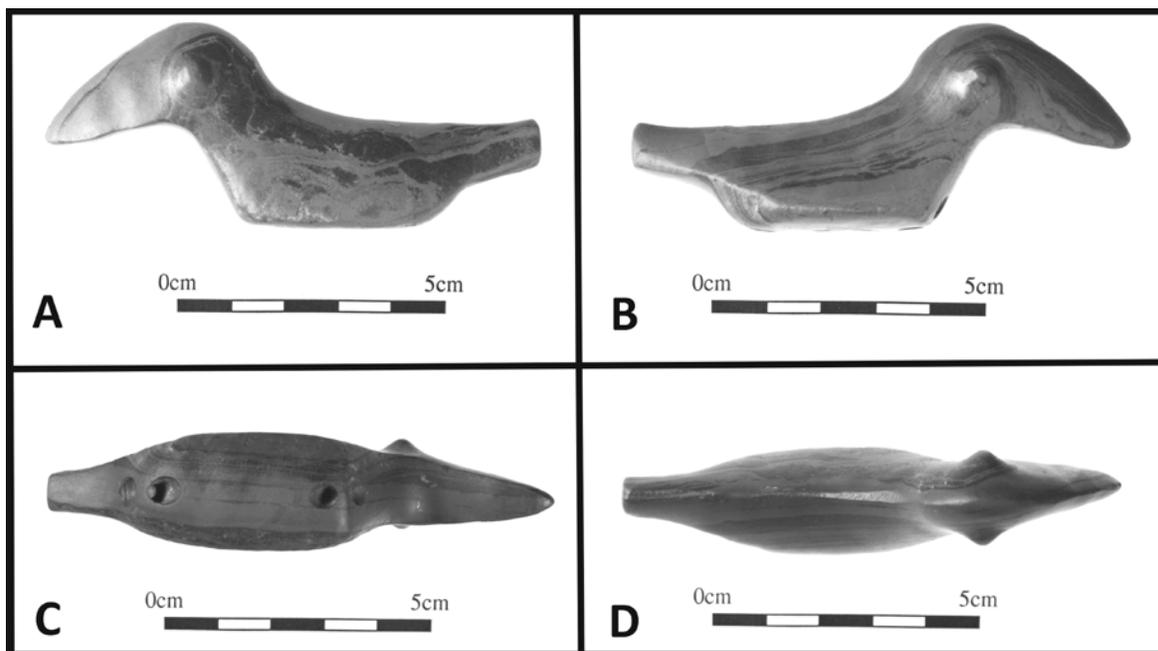


Figure 6: Multiple Views of Ausable Birdstone. Note diagonal drill holes at ends of the body in the bottom view (C).

The Ausable birdstone is quite small weighing just 46gm and measuring 89.6mm in length, from the tip of the bill to the tip of the tail, 68.7 mm in height and 19.9 mm in width. The top view (Figure 6D) allows us to see that the overall symmetry of the birdstone is very even and that the

body shape, while quite similar to the straight bar type, expands slightly and then tapers near the tail. Looking down from the top also gives us “a bird’s eye view” (sorry, I just couldn’t resist fitting that in) of the ‘nubbin’ shaped eyes which protrude just 2.5 mm from the head. This view also shows the tail to be tapered and truncated. The bottom view shows the biconical holes at the front and rear of the body, that are not only undamaged but also show very little wear.

One of the most common questions that I have been asked, when people hear about the Ausable birdstone find, has been, “Is it pop-eyed or is it the bar type?” The answer, which is quite evident in Figure 6 is, “Neither...”. The Ausable birdstone differs in many ways from the stylized pop-eyed” style. Although it does have sculpted eyes, they are small and nubbin shaped not at all like the dramatic protruding popeyed style eyes. On the other hand, unlike the popeyed style, the body of the Ausable specimen, although it expands slightly versus true bar-type birdstones, is relatively straight and narrow. As well, the tail is tapered, triangular and truncated, which is quite different from the broad, fan shaped tail of the pop-eye form. However, the neck on the Ausable birdstone is, unlike the typical bar type, somewhat longer and ‘angling’, much like the pop-eyed style (Figure 7)



Figure 7: Profiles of Bar (A), Ausable Birdstone (B) and Pop-Eyed Birdstone (C). A and C courtesy of Museum of Ontario Archaeology. Note: C is not nearly as expanded or wide as many pop-eyed examples (see, for example, Moorehead 1917: Plates 63, 66; Ritchie 1980: Plate 60-16)

The Ausable birdstone also differs in other ways from the typical bar type. The biggest difference is of course that bar type birdstones have no sculpted eyes while the Ausable specimen does have protruding nubbin eyes. The body, in spite of a slight expansion, is narrow and somewhat similar to the bar style body type or at least, is not as expanding centered as many, but not all, pop-eyed forms. The top down view (Figures 6d, 7b) does show how the bill and tail of the Ausable do 'narrow' somewhat compared to the typical bar style. The Ausable specimen does, however, have some characteristics in common with the bar type. It has a clearly less stylized, more bird-like form like the bar type and as mentioned above, the body is relatively narrow and relatively consistent in width and has a flat bottom.

When Chris Ellis first saw the Ausable birdstone in email photographs, his first response was, "Looks like a bar form and therefore, it could be a stylistically early pop-eyed form as the earlier Terminal Archaic forms that lack such popeyes have the narrow bar type body" (personal communication). After personally handling the specimen and conducting an in depth photographic study in the lab, he noted that the specimen was not a bar-like as he had first thought but was more slightly expanding and further speculated that the Ausable birdstone was most likely a "transitional" form from somewhere between the Glacial Kame bar form to the Meadowood popeye form which offers further confirmation of the "continuous transition in artifact form" that was suggested by Spence and Fox (1986). We know that Spence, Pihl and Murphy (1990) concluded that the "Meadowood probably evolved directly from the Glacial Kame complex..." and that one of the traits that led them to this conclusion was "the birdstone, differing primarily in the addition of protuberant eyes on the Meadowood specimens." Ellis (personal communication) suggested, based on some of his earlier work in a different context (e.g., fluted points; see Ellis and Deller 1997), that greater understanding might be achieved by looking more closely at this transition through typological dating, a long accepted archaeological technique of age estimation (see Renfrew and Bahn 2015:111-112). Birdstones that have greater typological similarity, or put another way, that share more specific traits in common, should be closer together in time and those that share less, which should be farther apart in time. Could we better determine gradual temporal changes by studying subtle changes in specific attributes of a variety of birdstones to further substantiate the idea that these changes in specific attributes represent a temporal sequence?

When planning this seemingly straightforward study I needed to see how many birdstones I could have access to for the purpose of comparison. Although there were hundreds of photographs of birdstones in Townsend's (1959) book, academic journals, etc. I quickly determined that photographs, being only two dimensional, provided insufficient typological data to be of use. So the first task was to find and gain access to a variety of actual birdstones. My first thought was the Museum of Ontario Archaeology (MOA), where I was very pleased to be given access to all of the birdstones in their collection. Nicole Aszalos, Curator at MOA went above and beyond, arranging space for me to work in the Museum's Public Archaeology Lab, providing unlimited access to all birdstones in their collection and very capably taking most of the photos of the samples used in the study. I had already determined that I would only use substantially 'complete' birdstones that were 'bird shaped' for the purpose of this comparison study. The MOA had eleven birdstones that fit those criteria. Seeking a larger sample size, I approached the New World Archaeology department at the Royal Ontario Museum, which is purported to house the largest collection of birdstones in the world, with a similar request. I was politely informed that despite their best efforts, they have been unable to keep up with the high number of inquiries and that my request had been noted and filed. I did with the help of fellow OAS member Stanley Wortner manage to track down one other birdstone from the Hind Site. So knowing that my sample size was much smaller than I had first hoped I decided to proceed and see what, if anything, I might conclude.

On Table 1 the sample is arranged left to right by eyeless, nubbin and popeyed forms, assuming this order was a main temporal trend. Then within each kind the other attributes are listed. Table 1 does suggest some potential attribute trends. Pointed heads, bulky heads, short necks, blunt tails and of course, bar type bodies, are associated with eyeless forms while tapered heads, horizontal bills, angling necks, fantails and, although rare, transversely ridged bases are found with popeyed forms. Also, forms such as angled down bills may be intermediate in time. Overall, I would suggest the short neck of the bar style appears to transition to a longer, angling style as seen in the Ausable and pop-eyed forms. The simple bird-like head of the bar and Ausable samples becomes much more stylized in the later forms. The small, somewhat blunt tails of the bar and Ausable samples again become much more stylized and exaggerated on most of the pop-eyed specimens.

However, many other attributes are not so clear cut and what it does more clearly suggest is that the sample size was too small and that some of the attributes traits lacked sufficient specificity or even that some traits recorded are not temporally sensitive or might even be time sensitive but regionally/spatially distributed. Two examples of attribute traits that I selected, which in hindsight needed to be more specific, come to mind. The first related to the body type where “expanding body” did not differentiate between bodies that were substantially expanding and those that were only slightly expanding. Similarly while several of the bar type specimens were deemed to have ‘rounded’ bases, they were only slightly rounded and not greatly dissimilar from the ‘flat’ base specimens. As far as sample biases, I used what I could gain access to but was most disappointed that I could not find another birdstone sample with ‘nubbin’ style eyes that might offer greater insight into the what might be a transitional style birdstone. It is also possible some attributes, such as a lack of drilled holes could actually represent unfinished examples.

Regardless, as well as the patterning in the ‘eye’ category or ridged bases or expanded bodies suggested by other researchers, some other possible temporal attributes trends do emerge. I think there is real merit in this type of study and suggest that it would with a larger sample size, more in depth research and more rigorous scientific methodology, be an excellent basis for a graduate student thesis.

CONCLUSION

Writing this article seems to be bringing me some sense of closure with my friend the Ausable birdstone. What have I learned through our meeting? I have learned, and continue to learn, a great deal about birdstones and the more that I learn the more questions that arise. I have learned that I very was fortunate to find a birdstone, after talking with many life long archaeologists who have not only never found one themselves, most of whom have never even been present on site when a birdstone was discovered. I have learned that sometimes, when you find a really “cool” artifact it is hard to say good-bye at the door to the lab. So...

POSTSCRIPT OR: WHAT’CHA GONNA DO WHEN I’M GONE?

So... once all the lab work was completed and this interesting little artifact had been carefully cleaned, measured, weighed, photographed “six ways from Sunday” I found that I had developed quite an attachment and was pretty sure that I’d feel some sense of loss when it took up more permanent residence in a university lab or museum display. Thanks to Chris Ellis, I had many great photographs of the birdstone but this amazing little sculpture somehow seemed worthy of something a little more exotic.

About this time my good friend and colleague Chris Dalton showed me a wonderful painting of a projectile point that had been painted by a scientific illustrator named Emily Damstra. A short time later he introduced me to Emily at a flint knapping workshop that we were all attending. Over the

course of the day I told Emily about the birdstone and how it was, in the eyes of this beholder, not only an intriguing archaeological artifact but also a beautiful work of art. When, at the end of the day, I finally gathered the courage to ask Emily if she would consider doing a painting of the birdstone for me she quickly agreed and was in fact quite enthusiastic about taking on this project.

After getting permission from Dr. Ellis to move the birdstone from his lab to Emily's studio, I delivered it to her in Waterloo. Emily was equally intrigued by the birdstone and so what I originally thought would probably be a quick "drop off" stretched out for more than an hour as we studied and discussed the birdstone, its attributes and its beauty. Never having worked with Emily before, I wasn't exactly sure what to expect. I assumed that my part of the process was done and that she would complete the painting and then notify me when it was finished and ready for pick up. Fortunately for me, this outcome was not the case.

Emily did everything possible to elicit my ideas, input and feedback throughout the project. Over the next few weeks she emailed several outline sketches for me to consider, followed by more complete sketches with shading and accents added (Figure 8). I thoroughly enjoyed the process and appreciated the opportunity to be so involved in it. By this point I was convinced that I'd made a great decision by having Emily illustrate the birdstone for me yet in spite of my confidence I was still completely surprised and thrilled by the quality of the finished product. The painting is in a word... unbelievable! Can a painting of an object be more accurate than a photograph? So it seems. The finished painting is a spectacular, life size image that not only captures in detail the style, form and colouring but also the beauty and craftsmanship of the piece. You can even see the slight indentations on the bird's bill, left by the sculptor when grinding the stone smooth. One of my friends, after inspecting the painting, remarked, "I can't believe the detail. How many bristles does she have in her paint brush...one?"

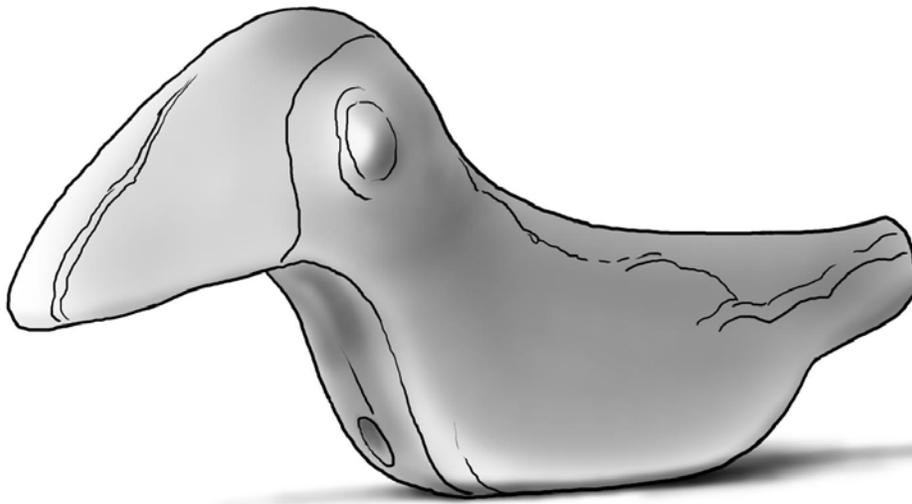


Figure 8: Early Birdstone sketch by Emily Damstra.

So, what to do you do with such an amazing painting -- one that brings back great memories, commands your sense of wonder and captures you're your imagination every single time that you look at it. Well, you frame it, hang it at eye level over your desk and enjoy it each and every day.

Emily posted the birdstone painting and some of her thoughts about it (see below) on her website: <http://emilydamstra.wordpress.com/2012/11/25/painting-of-an-ontario-birdstone/> and she has given

her permission for it to be printed in this article. Since the KEWA is printed in black and white I strongly encourage you to visit to her website to fully enjoy the full beauty of this painting and her many other works.



Birdstone illustration © Emily S. Damstra

The birdstone was found in a farmer's field in Southern Ontario during an archaeological survey earlier this year. It is an incredible sculpture, painstakingly carved from brown and black banded slate long before the existence of power tools (circa 900-700 BC). You can see that the sculptor used the contours of the banding to emphasize the features of the bird in a remarkable way. Notice how the eye bulges right where the bands form a circle, and how the edges of the bird closely follow the edges of the bands. (The opposite side of the birdstone is equally amazing). Drilled into the bottom of the bird are two places where one could thread a cord to attach the bird to something; you can see one of the holes at the front of the birdstone, right next to the copyright watermark. I can't help but wonder about who carved it and how he or she used this beautiful stone sculpture.

Emily, anyone who has ever found or seen a birdstone wonders the same thing. Theories about what birdstones were and how they were used, abound... but that's a very long story and come to think of it... not a bad idea for future KEWA article.

Acknowledgements. I am especially grateful to Dr. Christopher J. Ellis, for his long term mentorship, encouragement, patience, expertise and ongoing support of my interest in archaeology; Stanley Wortner for helping me track down one of the Hind Site birdstones; Allison and Jim Richards, owners of Stones N' Bones Museum for giving me access to the birdstone in their collection; Joan Kanigan and the staff at the Museum of Ontario Archaeology for giving me access and the space to study the birdstones in their care, especially Nicole Aszalos, Museum Curator, for generously sharing her time, interest, research and expertise in support of this project and article; Emily Damstra, scientific illustrator extraordinaire, for the wonderful painting; and finally, Jim Keron... for keeping my nose to the ground for those last few steps that led to my once in a lifetime discovery.

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Bonus: Another Unreported Nubbin-Eyed Birdstone on Banded Slate from the Ausable Drainage. Picture courtesy of Gary Zimmer, Grand Bend. Photograph by Chris Ellis.