Looking Back Today (Come What May) at Everblue By You

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This poster describes the results of final mitigative excavations undertaken at the Everblue Springs Site (EgPn-700). Archaeological evidence in the form of discarded animal bones and stone tools indicates human inhabitants visited this spring location several times over the last 8000 years. The extensive faunal assemblage recovered from the site included the remains of at least forty mature bison as well as bones from antelope, deer, canid, rabbit, and beaver. Along with the bone a unique assemblage of projectile points was found. Points resembling the large tanged and basal barbed projectile points collected at Everblue Springs have seldom been found in Alberta or beyond, and figure to represent a short lived style associated with a transitional period when projectile points and hunting technology were undergoing great change. Radiocarbon dates from the site place it as one of the four oldest bison kill sites found in the province of Alberta, and confirm this to be one of the most important precontact sites documented within the Calgary city limits.

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During the Fall of 2005 and Spring of 2006 mitigative excavations were undertaken at the Everblue Springs Site (EgPn-700) in Northwest Calgary (Plate 1). These excavations exposed a deeply buried bone bed in water saturated clays below Mazama Ash. Survey of the ash horizon helped create a landscape model of the ancient pre-Mazama ground surface which pinpointed here where the centre of the spring was located.

Plate 1: Panoramic View of the Everblue Springs Site (EgPn-700).

Systematic survey of the ash layer helped create a paleolandscape model of the ancient pre-Mazama ground surface. This modeling process assisted in identifying where the centre of the basin/spring used to trap the animals was located (Figure 1 and Plate 2).

Plate 2: Surveying of Mazama Ash Layer.

Figure 1: EgPn-700 Contour of Mazama Ash Surface in Relation to Excavation Area.

Overall, a total of 104m² (or approximately 2.4% of the estimated site area) were excavated to the base of the main bone bed (Plates 3, 4, and 5). These excavations resulted in exposing portions of the bone bed marked by significant concentrations of bone and an adjacent processing area, differentiated by concentrations of burned bone, lithic waste flakes, and non-bison bone elements. In addition, 2 samples were sent for radiocarbon dating. The first sample of bison bone resulted in a standard radiocarbon date of 7,430± 70 radiocarbon years before present (rcybp) (Beta 204365). The second sample, an antelope bone, resulted in an AMS date reported as 7,820± 50 rcybp (Beta 226504).

Plate 3: Excavating the Bone Bed. Note the Water Saturated Clays.

Plate 4: Cleaning an Excavation Block for Mapping.

Plate 5: Plan View of Bone Bed.

Analysis of the faunal assemblage indicates the main kill event took place in the fall or early winter, when at least 40 mature bison and two calves were ambushed and killed adjacent to the watering hole. Measurements of whole elements suggests these were larger *Bison occidentalis*, a bison population transitional to modern *Bison bison.* Other animals killed at the spring include Pronghorn antelope, deer, canid, rabbit, beaver and a bird (Plate 6).

Plate 6: Examples of the Non-Bison Assemblage from EgPn-700.

Figure 2: Plan Map of Activity Areas Identified at EgPn-700.

The distribution of burned bone, non-bison species, lithic debitage, and stone tools found indicates activities surrounding the kill were highly structured adjacent to the watering hole. A landscape reconstruction shows that most of the animals were dispatched in deepest portion of the spring while more select processing activities and the sharpening of stone tools were undertaken on higher ground around the perimeter of the watering hole (Figure 2).

An assemblage of large projectile points were recovered from the middle of the bone bed where they were broken and lost in the mix of mud, blood, and guts from the kill. This assemblage of large-tanged and basal barbed projectile points represents a unique point type that has seldom been found in Alberta or beyond.

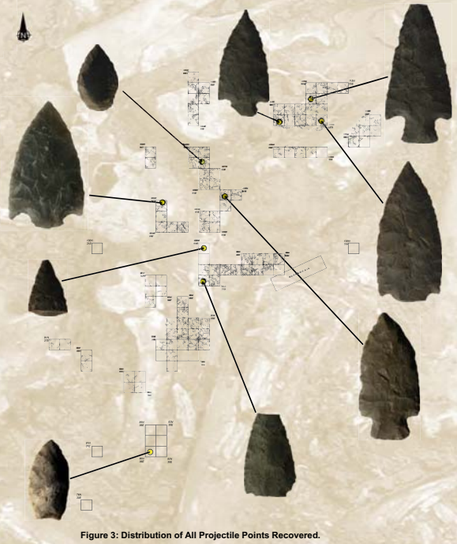

Figure 3: Distribution of All Projectile Points Recovered.

The lithic raw materials used to make these points, and much of the debitage found on the periphery of the kill, indicates the people who created this site had a great familiarity with lithic sources from the neighbouring foothills and mountains, and the lack of more exotic lithic materials indicates this population did not maintain extensive regional ties (Figures 3, 4; Plates 8,9).

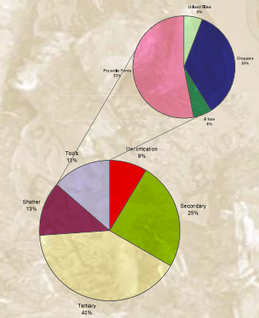

Figure 4: EgPn-700 Lithic Reduction Stages (N=126) and Tools Recovered (N=17).

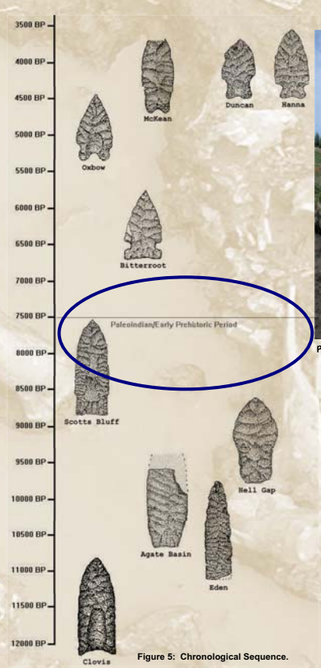

Figure 5: Chronological Sequence.

Plate 9: Top of the World Chert Projectile Point Recovered in the Field.

Plate 8: Example of Khaki Siltstone Projectile Point.

Radiocarbon dates from EgPn-700 place the main component at the site within a transitional period between the end of the Paleo-Indian Period and early stages of the Middle Precontact Period (Figure 5). Within the Calgary area, this period falls into the Tuscany Subphase (dating ca. 9,500-7,750 years B.P.), a period characterized by generalized hunters and gathers considered to be resident within the local foothills and mountains. To conclude, Everblue Springs can be added to the list of other pre-Mazama sites found in Calgary and the ca. 8,000-7,500 year old age of the site places this as one of the four oldest bison kill sites excavated in Alberta.

Artist's Rendition of Everblue Springs Site

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