The Lovat Avenue Biface

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Recently, while looking through the archaeology collections at the Royal BC Museum, I found a projectile point with attributes of an unfinished fluted point (DcRu-y:196, Fig.1). Fluted points are characteristically large and finely flaked lanceolate bifaces that have been thinned at the base by the removal of long channel flakes—called flutes—along the central axis of one or both faces facilitating hafting to spear shafts or knife handles (see Fig. 2). Fluted points have become an icon of early period archaeology in the Americas because of their broad geographic distribution and early age. The technology has been found throughout North America and as far as South America, and it typically dates from earlier than 11,000 to about 8,000 radiocarbon years ago, or 13,000 to 9,000 calibrated calendar years ago. Some basally thinned points are similar in shape to fluted points. They date to about the same age or are slightly younger and, instead of flutes the tools, have been thinned along the base by the removal of several smaller flakes that are not as long as flutes. This is important to note because the point that is described herein is not fluted, but its flake scar patterning, base shape, length, width, thickness and lancolate form are consistent with an unfinished fluted point or possibly a basally thinned type. The Lovat biface is noteworthy because fluted points and similar tools are not common in British Columbia.

A local resident donated the biface in 1959. Fortunately, museum records document the find location: the artifact was found on Lovat Avenue in the municipality of Saanich in Greater Victoria (Fig. 3). Here I describe the biface and place it into context with similar artifacts nearby.

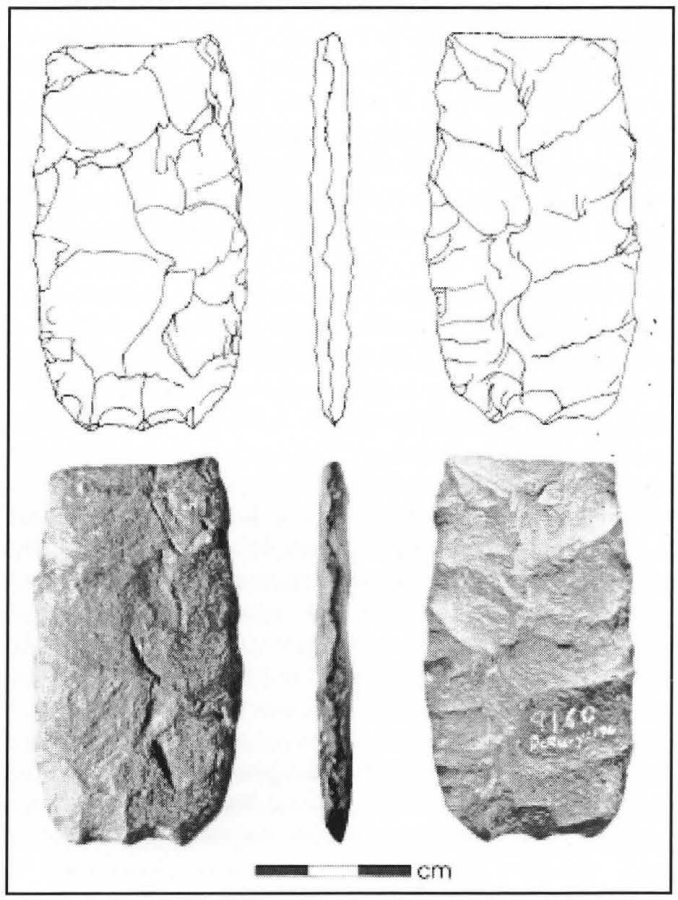

Figure 1. The Lovat Avenue biface (DcRu-y:196) showing both faces and one edge margin. Brian Seymour drew the artifact (top).

A Description

Only the medial and basal sections of the biface are intact. It is 73 mm long (broken), 39 mm wide, 7 mm thick, and has a maximum width to thickness ratio of 5.6. Complete biface length cannot be determined but it likely extended to a total length of about 100 mm. The terminal break is transverse to the blade margin and it appears to have broken as its maker was flaking the tool laterally. The point is made of a volcanic stone, probably dacite or basalt, that can be tough to flake and raw material constraints may have contributed to it breaking.

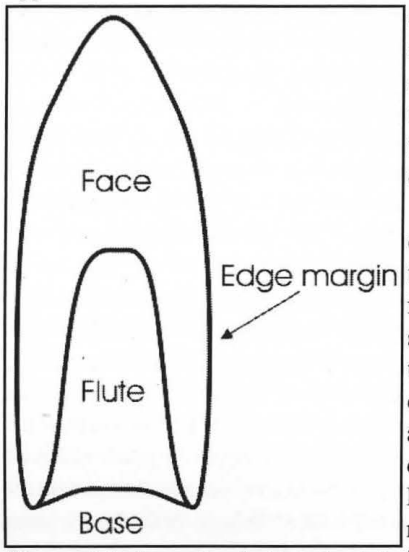

Figure 2. Schematic of a fluted point

Widely spaced collateral and irregular thinning flakes formed a flattened lenticular cross-section. Flake scars extend to or beyond the centre of each face and its surfaces are even with few lumps or hinge terminations. Ridge crests from flake removals form small striking platforms along the edges of the biface that are to or above the center plane resulting in a wavy margin. Its blades are parallel to convex and taper to a biconcave or v-shaped base. One face is beveled at the base toward the opposite face.

How it was made

Similarities between the Lovat biface and unfinished fluted or basally thinned forms can be understood in the context of how the tools are made. According to Callahan's observations of artifact replications (2000), the process of manufacture begins with preparing a stone blank by flaking it from the edges inward on both faces until the tool has an even, sometimes flattened cross-section with a moderate to high width/thickness ratio. Edge margins are straightened at an intermediate or late stage in the production process. If the biface is to be fluted its base is prepared by selective flaking to isolate a striking platform from which to remove a flute that can result in a biconcave or v-shaped base as on the Lovat specimen. Producing basally thinned points may also require platform preparation for removal of small flakes from the base. Retouch along the margins and grinding to smooth rough flake scars before hafting are common attributes of finished tools. Unlike many finished fluted and basally thinned points, the edge margins of the Lovat biface have not been extensively retouched

nor straightened, it still has a v-shaped basal platform as preparation for flake removal from its base, and it is not ground on the base or margins as the finished points often are.

It is possible the biface wasn't intended to be fluted, however its flake patterning, width to thickness ratio and basal treatment are consistent with an intermediate to late stage fluted point or possibly a basally thinned form.

How old is it?

The Lovat biface was not collected by archaeologists during careful excavation and there is no radiocarbon date associated with it.

In some cases archaeologists can narrow the age range of projectile points that come from undated contexts by comparing them with similar dated tools. Fluted points are an example of this. Together the suite of fluted point types, including Clovis, the oldest fluted type, and numerous regional variants usually date from close to 13,000 to about 9,000 years ago. Basally thinned point types, such as Goshin and others, commonly date to within the time range of fluted forms or slightly younger.

Because the Lovat biface is an incomplete isolated find it cannot easily be assigned to one point type or a very specific time range. For instance, Beck and Jones (2009) have defined criteria for identifying Clovis points which do date to a fairly specific time period, but because the Lovat point is incomplete it cannot be expected to fulfill all of the criteria of the finished tools. That said, the Lovat specimen does have common characteristics with points that have been called Clovis at various times, including width to thickness ratio, estimated length, width and shape, yet these attributes are not typical only of Clovis or of another type making its relationship to these types unclear. That no flake was removed from the prepared base of the Lovat specimen also complicates its characterization as a specific type, though future analyses that compare it with similar early points in the region may be able to define its morphological and possibly its temporal relationship with Clovis or other point types that are present nearby. At the moment what can be said about the age of the Lovat biface is that it probably dates to within the time range of fluted and similar basally thinned points but a more precise age estimate is not possible.

Similar bifaces from British Columbia and nearby

The Lovat Avenue specimen is a new addition to the early record of archaeology in British Columbia. To provide a regional context for the artifact, here is a list of points from the province and nearby that have been characterized as fluted by the authors who reported them along with a number of points that are basally thinned and similar to fluted forms (Fig. 4).

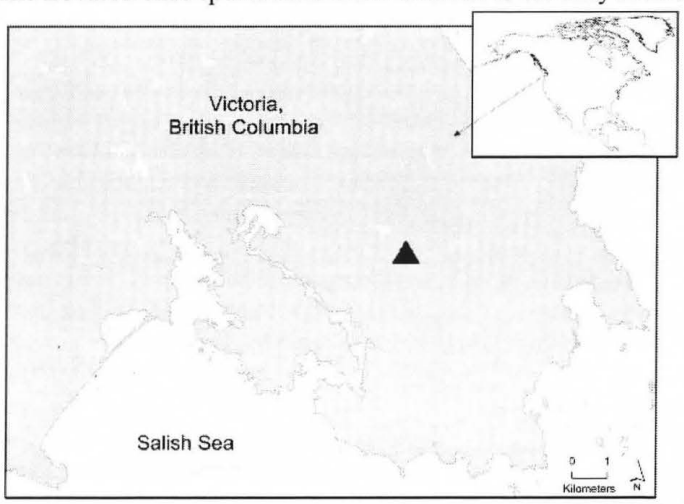

Figure 3. Portions of Greater Victoria with the location of Lovat Avenue indicated as a black triangle.

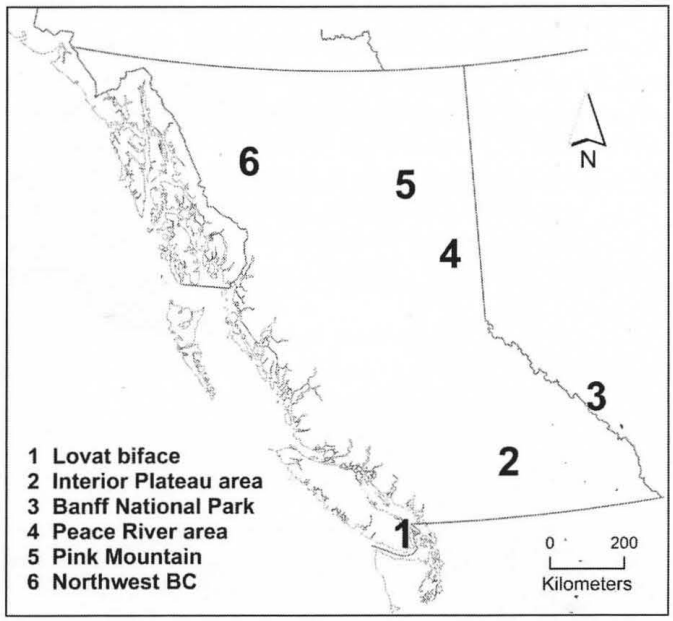

Figure 4. Biface locations in British Columbia that are mentioned in the text

In British Columbia the finds began with two points that Fladmark (1981) documented during archaeological inventories of the Peace River area. Continuing archaeological interest in the Peace region resulted in excavations at Charlie Lake Cave where a fluted point was recovered from stratified deposits directly associated with radiocarbon dates of between 10,100 to 10,770 before present (Fladmark 1996). Wilson (1986) and Wilson and Carlson (1987) found two more sites in the northeast: the Anderson site and a lithic scatter near Pink Mountain. Brolly and Begg (2008) reported a fluted point from the Williston Lake Reservoir and subsequent ground surveys of the area by Eldridge et al. (2008 and later reports) have turned up least five early period basally thinned points. The artifacts found by Eldridge and company resemble finished fluted points though with base flake removals that are smaller than what is typically characterized as fluted.

Archaeological surveys in the northwest portion of the province (Baseline 2010; Mathews 2007) have uncovered two basally thinned obsidian point fragments that may date to an early period. Further archaeological work in the area could better define a temporal range for these tools. It would also be interesting to compare the two points with basally thinned forms that have been found to the north in the Yukon and Alaska. Analyses of fifty or so fluted points from Yukon and Alaska are currently underway (Goebel pers. comm. 2011).

Just across the border to the east in the Vermillion Lakes area of Banff National Park, Alberta, a small number of projectile points that are comparable to diagnostic fluted points were recovered (Fedje 1996). A long-term effort to inventory fluted points throughout Alberta has documented over two hundred (see Ives 2006).

From the Canadian Plateau in south-central British Co-

lumbia, Rousseau (2008) has identified five basally thinned and fluted forms, one of which has a v-shaped base. To the west and south of British Columbia in Puget Sound, Croes et al. (2008) mention nine Clovis localities including one site on Whidbey Island, about 50 km southeast of Victoria, where a complete Clovis point was found that it is not entirely unlike the Lovat biface (Avey 1992); it is slightly smaller than the Lovat biface and its blades do not taper to the base. Together in Washington, Oregon and Idaho over 120 fluted points are known (Haynes 2002).

Fluted points have not been found on the British Columbia coast north of the Strait of Juan de Fuca (Carlson 1991) nor from many of the mountainous interior portions of the province. The lack of fluted points from these regions may be for want of looking in the mountainous interior but the same cannot be said for the coast where extensive archaeological surveys have been done, particularly along modern shorelines. Fluted points that are found in the future will undoubtedly be highlighted in published form wherever the points may be found in British Columbia.

Where it was found

Ancient archaeological sites can be found along relict ocean shorelines that are either higher or lower than the modern shore. In Greater Victoria, the most substantial sea level changes occurred when glaciers last receded from area more than 14,000 years ago. As glaciers melted the land rebounded from the weight of ice and the sea dropped in relation to the land. The changes were rapid at first with sea level dropping from as much as 75 meters above modern shoreline to near 30 meters below (James et al. 2009). In fact, the water's edge in Victoria has been lower than it is today from about 13,000 to 4,000 years ago or later (Eldridge and Steffen 2008; Fedje et al. 2009). In terms of archaeology this means sites that were occupied when sea levels were lower are now submerged.

But not all early sites are underwater. The Lovat biface indicates that there was an early period of human occupation in Victoria along the gently rolling terrain of Lovat Avenue which is now about two kilometers distance from the nearest coastline and ~50 metres elevation above high tide. The locality could have been a shoreline occupation as sea level dropped soon after glaciers receded though it is more likely to have been an inland habitation or hunting place that was occupied when the sea was lower.

Conclusion

Characteristics of the Lovat Avenue biface are consistent with a nearly finished fluted point or basally thinned form. Few such points have been found in British Columbia and because higher numbers of fluted points have been found to the south, east and in the Yukon and Alaska to the north it is likely that the technologies moved into the province from these adjacent areas. The Lovat biface may be most closely related to similar points that have been found nearby to the south and east as additional analysis could demonstrate.

Martina Steffen is the Senior Collections Manager of Archaeology at the Royal BC Museum. Among other projects, Martina is studying early period archaeology on Vancouver Island through an environmental archaeological approach. Email: msteffen@royalbcmuseum.bc.ca

Further reading

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