

## Update on Wisconsin's Silver Beach Elk Site (47BA526)

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The discovery and initial reporting of the Silver Beach Elk site called attention to the unusual association of a fluted point with much of a well-preserved elk skeleton (*Cervus elaphus*) in northern Wisconsin (Hudson 2006). Two samples of the elk bone have since been radiocarbon-dated, yielding dates much younger than the associated Gainey-style fluted point would suggest. Apparently the elk kill occurred in a separate and far more recent hunting event than did the loss of the fluted point, and the two items came to rest near each other on the bottom of the Middle Eau Claire Lake by independent means.

The first radiocarbon sample was taken from an elk rib that exhibited

butchering marks. It was submitted to Beta Analytic and AMS-dated to  $380 \pm 40$  RCYBP (Beta-215798). Given the recentness of this date, and the documented difficulty of accurately dating ancient bone, a second sample was submitted. The second sample was taken from the interior of the elk skull, which is still attached to the antlers, providing an especially secure taxonomic identification of the source bone. The second sample was submitted to the Stafford Research Lab. Stafford's collagen-extraction protocols help to eliminate potential modern contaminants at the molecular level, and these techniques have proven successful in the past in dating late-Pleistocene faunal material. The Stafford sample was AMS-dated to  $360 \pm 15$  RCYBP (UCIAMS-29115). The two dates show strong overlap and place the elk in protohistoric or early historic times.

Underwater test excavation in the summer of 2006 confirmed the stratigraphic context of the site as proglacial outwash sand and gravel, as indicated by Clayton's (1984, 1985) geologic mapping of the area. Clayton's regional reconstructions of glacial advances and retreats suggest that the site area could have been an active proglacial outwash zone, in the form of shallow braided streams, as early as the Airport Advance (about 12,300 RCYBP), with increasing amounts of dry land available to Paleoamerican hunters by the Lake Ruth Advance (about 11,500 RCYBP). This time frame and ecological setting matches reasonably well that hypothesized for other groups using Gainey-style fluted points across northeastern North America. The fluted point shows no signs of water-rolling, and to date no additional lithic materials have been recovered from the site; the point may represent an isolate lost during a hunt.

The spatial association of the elk and the fluted point remains somewhat puzzling. The fluted point was found in 2005 less than 1 m south of the elk remains; soil tests in 2006 showed no stratigraphic distinctions in substrate across this meter span. Additional elk remains were recovered in situ during controlled excavation in 2006. These included the left mandible and part of the hyoid, both firmly embedded in the surface of the sand and gravel stratum. Most of the elk remains were recovered in approximate anatomical position, suggesting the carcass became embedded in the sediments while still largely intact. Wounding and butchering marks on the skeleton suggest the animal was killed by stone weaponry that penetrated the left scapula and entered the rib cage, nicking two ribs on the way, and that butchery focused on dismembering the limbs. The location of a partially intact elk skeleton with wounding and butchering marks on a lake bottom that is now approximately 1.5 m under water and roughly 30 m from the modern shoreline is somewhat problematic. Given that the antlers are well developed and still firmly attached, the animal may represent a winter kill butchered on the frozen lake, which subsequently fell through the ice and came to rest on the bottom. At present the spatial association of the elk and the fluted point is best explained as accidental. Given the underwater location of the point, it is unlikely it would have been discovered had not the more visible elk skeleton attracted attention to the spot. Perhaps other such fluted points lie waiting to be found in similar submerged proglacial sediments.

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### References Cited

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