A paleoenvironmental and paleogeographic reconstruction of the Terminal Archaic - Woodland Boswell site, Kingston, Nova Scotia, Canada

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The Boswell archaeological site is located near Kingston, Nova Scotia, on farmland next to the Annapolis River. Despite being the area of earliest European occupation in Canada, very little is known about Pre-Contact occupation along the Annapolis River drainage system. This has long puzzled local archaeologists, as the Annapolis River is an obvious travel route to the interior, and a large (2130 km^2) watershed rich in plant and animal resources. However, in 2009 artifacts were found at the location which has subsequently revealed a complex history of site development. Excavations at the site have uncovered potsherds, lithics and ecofacts which collectively indicate Terminal Archaic to Late Woodland occupation. Ecofacts from the site suggest that beaver hunting and fishing took place, along with the collection of various edible berries and nuts. Although the site was likely intermittently occupied from the Terminal Archaic to the Late Woodland (ca. 3800–1000 BP), the environmental and ecological conditions which made this location appealing for native occupants are unknown.

High resolution paleoenvironmental data from wetland and lake records in southwestern Nova Scotia indicate that at about 3000 BP forest composition changed rapidly as cooler and moister conditions developed. At this time hemlock became a more significant component of the forest cover in the region. From 3000 BP till 1000 BP, cool and moist conditions were punctuated by occasional droughts. The Boswell site is located on one of the few reaches of the Annapolis River that experienced little lateral migration in the last 3000 years, a condition which facilitated site preservation. The river terrace at the excavation site was formed by 3000 BP in response to both an increase in river discharge and a prominent bedrock sill which aided sediment aggradation. A prominent depression in the sill about 20 m upriver from the site has created one of the few large, deep (>3m) pools along the stable reach of the river and may have been a harvesting site for migrating fish species including shad, alewife, brook trout and smelt all of which were thought to be important resources.

Collectively, forest composition, which aided in bank stability, increased river flow which facilitated fish occupation and migration, bank stability and the presence of a harvesting site nearby may have made this site desirable for continued seasonal use over a long period of time. Recent erosion at the site appears related to development both upstream and downstream from the Boswell site.

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