

WHAT LIES BENEATH

EXCAVATIONS AT DRAGON LAKE

by Marianne Berkey

A great portion of the archaeological work undertaken in this province is mitigative or consulting archaeology, related to proposed developments. The reality of mitigative archaeology is that research design is constrained by the plans of developers who are required to follow the letter of the law but normally have little interest in funding projects, particularly outside their proposed impact zone. So, financial resources are funnelled toward managing only those sites that may be in direct conflict with proposed developments. This approach has had positive results in the identification of many archaeological sites in remote locations but investigation of these sites is normally limited to the minimum necessary for recording and registering the site. Sites found in conflict with development are managed according to their assessed significance, within the limits of the governing legislation.

The potential difference between the assessed significance of a subsurface site at the inspection stage and its true content and complexity is explored in this article. Sites are not usually subject to in-depth investigation unless impacts to the site are unavoidable. Small subsurface sites, initially thought to be of low significance, may have more to contribute in the course of further research, as the following example from the Quesnel area illustrates.

Background

In the fall of 2000, archaeological investigations were conducted under Heritage Inspection Permit #2000-305, at the Dragon Lake IR 3 site, FfRo 23. This is a small subsurface lithic scatter site located on the northwest shore of Dragon Lake approximately 4.5 km east of Quesnel, BC (Arcas 2000).

FfRo 23 was initially recorded during a 1997 archaeological impact assessment (AIA) of a proposed road upgrade project. At that time, the scientific significance of

FfRo 23 was evaluated as low to moderate. This evaluation was based on characteristics of the site revealed during the AIA, including the limited spatial extent of the site and the low density of cultural materials. The AIA report notes a lack of formed tools, exotic materials, and identifiable faunal remains at FfRo 23. The level and extent of the disturbance resulting from previous road and drainage ditch construction was thought to have effectively diminished the potential scope of further studies. Despite these drawbacks, the location of the site on the northwest shore of Dragon Lake, near its outlet, was noted in the impact assessment report as a factor that increased its predicted scientific significance (Arcas 1997).

All the other pre-contact sites recorded in the vicinity of Dragon Lake are located on the east or south shores of the lake. Excavations had previously taken place at two other pre-contact sites: at FfRo 4 in 1977 (Thomas 1977) and at FfRo 10 in 1979 (Lawhead 1980). These earlier excavations were also conducted in order to mitigate road upgrades. Although an effort was made at relative dating, no directly dateable material was recovered during these earlier excavations. Referring to the antiquity of FfRo 10, Lawhead (1980:65) notes that:

The artifacts from around Dragon Lake indicate that this area has been utilized for a long time. Several "early" point styles have been noted in local collections and the large point...from Cluster 1 at FfRo 10 has similar characteristics. Microblades are common, but the chronological history of this tool type in the Central Interior is not well understood.

With regard to site function, Lawhead (1980:65) suggests only that the area was "probably used seasonally by small family groups." Further interpretations were hampered by the lack of good stratigraphic data.

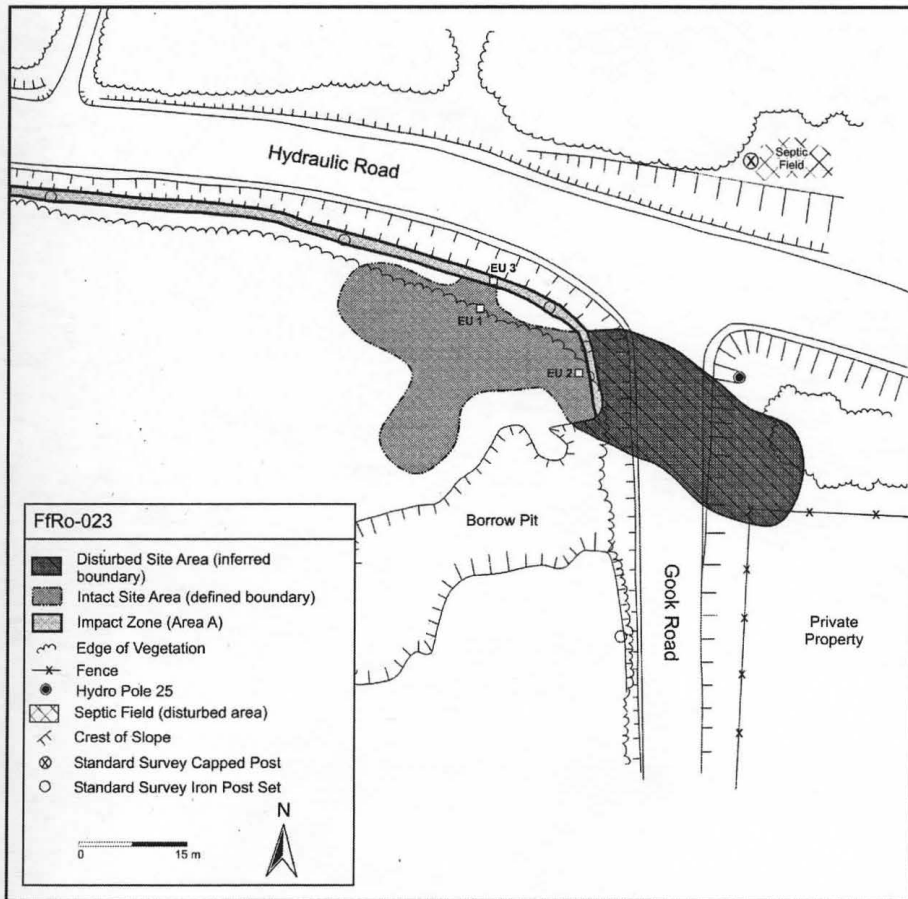
FfRo 23 is located in an area rich in resources. Positioned on the northwest shore of Dragon Lake, near its outlet, only 5 km from two major rivers, the Fraser and the Quesnel, the site location would have offered several advantages to its pre-contact residents. The lake and creek would have supplied a reliable source of potable water. Locally available plant resources include many food plants such as berries and nuts. Beaked hazelnut, black twinberry, and highbush cranberry are present on the site today. Other useful plants, such as trees and brush for construction materials, would have been readily available. Both small and large game occupied the Dragon Lake area and the hunting of these animals would have contributed to the food supply of residents at this site.

The lake has also provided a reliable source of freshwater fish. A recent ethnographic study of the local Southern Carrier community, the Red Bluff Band, describes people ice fishing on Dragon Lake in the winter, and fishing from canoes in the spring and early summer before heading to the major rivers in late summer for the salmon run. Dewhurst, in his Aboriginal Sustenance Impact Assessment (Archeo Tech Associates 1993:27) notes that:

When the ice left in early spring, families visited lakes and creeks to fish whitefish (*lhwewh*), suckers (*goosbai* and *delgiyas*), ling (*tsintelh*) and trout (*tuk'i*). Trout were caught with a pole and line, and the other fish were taken in nets. Families caught these fish in Dragon Lake (*Slughun*, 'big snake') and in the creeks that flow into and out of Dragon Lake. GL [an informant] recalled that on Dragon Lake families fished from dugout cottonwood canoes; they would smoke dry the fish for later use, until mid-July when the sockeye salmon came up the Fraser River.

and,

During the winter, families also got fresh fish from ice fishing on the lakes. Nets were



Site FfRo 23: disturbed and intact site areas.

put under the ice to catch whitefish and suckers. Sturgeon were caught in lakes by means of hooks and lines. The Red Bluff fished through the ice on Dragon Lake (Archeo Tech Associates 1993:33).

Dragon Lake is in a unique position to provide ease of access to major fishing spots on the Fraser River. Although no specific mention was made of fish weirs or traps at the outlet of Dragon Lake in the ethnographic sources, the outlet would be a logical location for intensive fishing activity.

Dragon Lake itself is a remnant of a much larger glacial lake that existed in this area roughly 10,000 years ago after the Fraser Plateau was deglaciated. FfRo 23 is situated on top of old lake bed sediments. Matrix observed in the lowest layer of the site, during the excavations, is consistent with expected lacustrine sediments. Artifacts and other cultural material such as animal remains were deposited on and imbedded directly into clay lacustrine sediments. Clay sediments were also observed at the base of the excavated sites on the east and south shores of Dragon Lake (FfRo 4 and FfRo 10).

FfRo 23 Excavations

The excavation at FfRo 23 consisted of two days of fieldwork conducted in the fall of 2000 with a small crew ranging from two to four people. Funding limited the mitigation to three 1 m² units. The excavation of these units recovered a total of 62 artifacts including both formed tools and debitage. The artifacts were split fairly evenly between two major sedimentary layers, Layer A (39 percent) and Layer B (58 percent), with the densest clustering of artifacts recovered in the top few centimeters of Layer B in Excavation Unit #3. All of the recovered artifacts were made from stone and were produced by flaking. Three raw materials were identified: basalt, obsidian, and quartz. Basalt was most common, making up 90 percent of the assemblage, and ranged from coarse to fine-grained in quality.

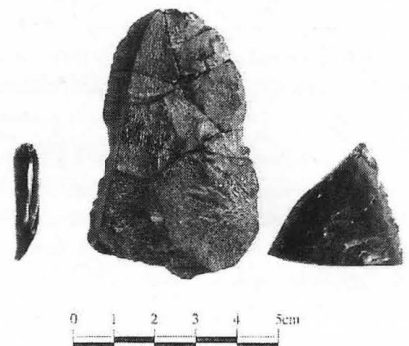
Formed tools account for a small portion (n=3 or 4.8 percent) of the lithic assemblage from FfRo 23, all recovered from Layer A. One obsidian microblade, one basalt biface with medial indentations, and one unifacially retouched basalt flake

scraper fragment completes the formed tool assemblage from these excavations.

The small assemblage and, equally small, excavated area renders analysis regarding the distribution and function of these artifacts difficult. Overall, the lithic assemblage is comparable to that found at both FfRo 4 and FfRo 10, particularly to the latter, where formed unifaces, bifaces, microblades, and retouched flake tools were reported.

The obsidian microblade shows discontinuous microflake scars on one lateral margin, when viewed microscopically, but it is unclear whether this represents use-wear or simply accidental chipping resulting from other factors. Microblades are produced using a specific manufacturing technology that requires the careful preparation of a core from which a series of small parallel-sided blades can be removed in succession. The resulting blades are small, sharp cutting tools, which can be hafted and used in a number of ways including cutting hides or any other soft materials, such as those used in basketry or cordage (Hutchings 1996:174).

Greaves (1999) explored several questions regarding microblade technology and its relationship to the subsistence-settlement behaviour of pre-contact people in the southern Interior Plateau. Greaves (1999:208-210) found that microcore technology was associated with both residential camps and field camps and that the resulting microblades appear to have been used for a variety of activities, more often related to food processing and tool/utensil manufacture than to food procurement.



Formed tools: obsidian microblade (left); basalt biface (centre); basalt scraper fragment (right).

The source of the obsidian used in making this microblade has not been determined but the nearest known source of obsidian to Dragon Lake is Anahim Peak, located 220 km southwest, in Southern Carrier territory. The presence of obsidian at this site likely indicates a trade system that allowed the site inhabitants access to finer raw materials than was locally available. Alternatively, people who used this site may also have travelled long distances at times to visit relations and collect raw materials (Furniss 1993).

Microblades, or possible microblades, have been reported for a number of sites in the Quesnel area, including Tezli, Natakus Lake, Ulgatcho, Punchaw Lake, Pantage Creek, and at FfRo 10 on the south shore of Dragon Lake. Unfortunately the precise chronological history regarding microblade technology in this region remains obscure, so this artifact alone cannot shed light on the age of the site.

The biface is a large modified flake with the majority of shaping flake scars on the dorsal side. The medial indentations appear intentional and may represent a modification for the purpose of hafting the tool. Grinding and polishing is evident on all lateral margins of this tool, indicating use wear. The basalt biface was recovered in seven pieces, which were later refit in the laboratory. The pieces were recovered in one quadrant of Excavation Unit #2, and had not been scattered or lost over time, suggesting that the biface may have been deposited whole, and broken later by trampling or some heavy object, such as machinery, moving over the site.

Grinding and polishing is also visible on the retouched edge of the unifacial scraper fragment, which is triangular in shape with one broken lateral margin, one with cortex, and one with steep unifacial retouch. The scraper fragment may have been broken during use and the tool subsequently discarded by the site inhabitants.

Debitage accounts for the largest portion of the recovered lithic assemblage from FfRo 23 ($n=59$ or 95 percent). The lithic debitage falls into three categories: platform-remnant bearing (PRB) flakes ($n=39$), flake shatter ($n=17$), and block shatter ($n=3$).

A small number of faunal remains were recovered during the excavations in one concentration. An excavation unit was de-

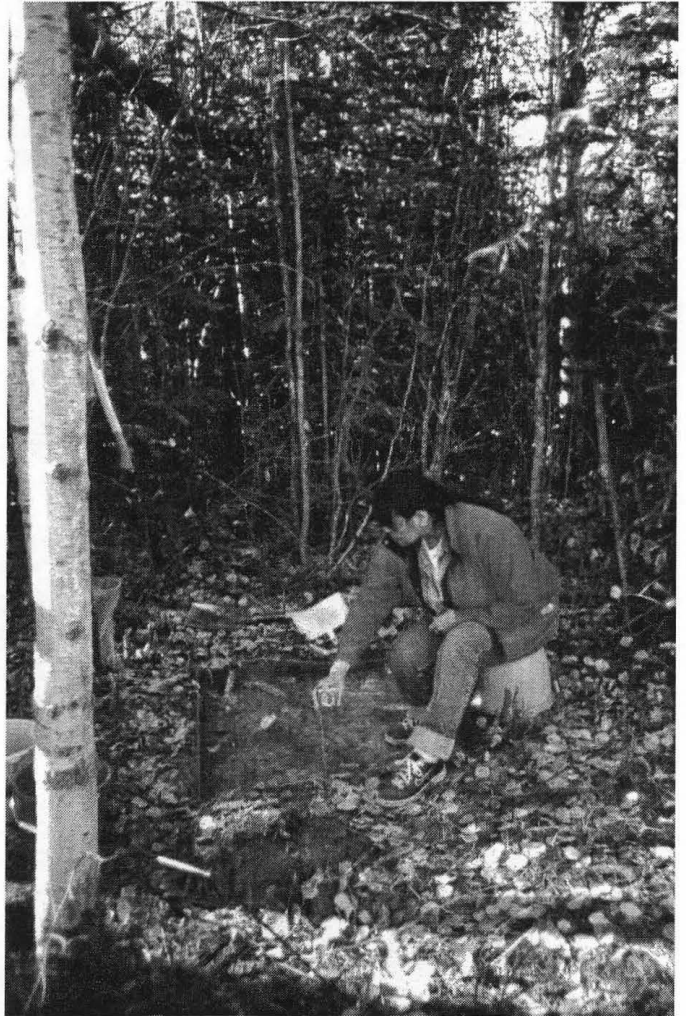
liberately placed in an area where burned bone fragments were reported during the 1997 AIA, with the hope of recovering identifiable fauna or dateable material. Fragmentary bone was collected from three quadrants of this unit.

All the bone appeared to be from one or more medium- or large-sized mammals and most was burned (calcined). One bone fragment was identifiable to taxon and element; this was the distal articular surface of a metapodial (foot bone) from a large artiodactyl, likely elk or caribou. This, the largest, bone fragment was used for a radiocarbon dating sample described below.

The presence of a concentration of burned mammal bone suggests that a distinct area of activity involving the processing and cooking of meat occurred within and possibly also to the northwest of Excavation Unit #3.

The bone fragment was submitted to the Beta Analytic laboratory in Florida for AMS radiocarbon dating. The conventional radiocarbon age of this bone sample is 1870 ± 40 years BP. The calibrated calendar date, with a 95 percent probability, lies between AD 60 and 240, which is thought to represent an early date for this site.

The bone sample, weighing 4.1 g, was recovered from the lowest sedimentary layer of the site. Initially submitted for bone collagen dating, the bone proved to be degraded, either through groundwater leaching or microbial activity. The sample was subsequently dated using bone organics providing a minimum age for the sample. There are no leaching materials present at the site that would contain car-



FfRo 23. EU #2, Fiona Boucher.

bon older than the sample (e.g., coal), therefore the sample is considered to provide a reliable result regarding its minimum age.

Discussion

Some interpretations regarding site function can be made based on the results of this investigation together with the available ethnographic information and the overall context of the site. There is evidence for repeated use of the site area through time, since cultural material was uncovered at depths ranging from 0 to 24 cm below surface in two distinct sedimentary layers. The low density of artifacts suggests that use of the site was not intensive. The duration of residence at FfRo 23 is not clear, but based on the ethnographic sources, the Dragon Lake area was probably visited for at least brief periods during winter and throughout spring and into early summer.

It is likely that a variety of activities, associated with procurement and processing of food and other materials, occurred at this site. The processing of hunted game is supported by the presence of burned bone and cutting and scraping tools. These tools may also have been used for processing fish. It is likely that fishing-related activities were taking place at this site considering its location relative to the lake and its outlet, even though no fish remains were recovered. The absence of fish remains may be due to the poor preservation of organic materials in acidic soils. As noted above, ethnographic sources describe the use of Dragon Lake for fishing at several points during a yearly seasonal round.

The scientific significance of Dragon Lake IR 3 site, FfRo 23, was rated as low to moderate in the report for the 1997 AIA. The predictions made in 1997 regarding overall site complexity were largely borne out during the subsequent excavation project, however documentary research and site content yielded several pieces of information that bring insight not only to the history of FfRo 23 but to that of the surrounding area and its archaeology. It may be argued that further investigation at the site revealed enough additional information to increase the assessed scientific significance of the site.

The fundamental site characteristics listed in the 1997 AIA report included the low density of cultural materials, and the lack of complex internal stratification, human remains, or cultural features. In this respect the excavation results are consistent with those predicted during the AIA. However, in contrast to the AIA results, formed tools were discovered at this site during the excavations and one of these, the microblade, may prove to be temporally diagnostic once future research sheds more light on the chronological history of microblade technology in this area. Exotic materials are present at FfRo 23. Obsidian is considered to be exotic to the site since the nearest known source for obsidian is at Anahim Peak. Also, despite the poor condition of the faunal remains, there was one identifiable mammal bone fragment recovered from the site, which also proved suitable for radiocarbon dating.



FfRo 23: Excavation of EU #2. Fiona Boucher at screen, Brian Pegg in unit.

This bone sample is the only directly dated material from the Dragon Lake area. Based on the results of this investigation, the scientific significance assessment for this site was re-evaluated and increased.

This short investigation revealed several aspects to this site that were not apparent during the AIA and allowed for more consideration of the site history than was feasible, or expected, during the 1997 inspection. Although the AIA succeeded in its overall predictions, further research allowed for an exploration into the history of the site and a more meaningful contribution to the archaeology of the area.

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