

Liberating trails and travel routes in Gitxsan and Wet'suwet'en Territories from the tyrannies of heritage resource management regimes

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Abstract

Despite their unmistakable significance in regional histories and unique roles in cultural transmission and traditions, Indigenous trail systems are frequently ignored in non-Indigenous heritage resource management regimes. These regulatory regimes often require that heritage have discrete spatial and temporal boundaries and predefined material attributes and functions. However, as landscape-scale connectors of peoples, places, and times that blend spiritual, economic, and educational functions, trails challenge these proscriptions. Trails eschew cost-effective identification, documentation, and conservation. Accordingly, and because trails cannot be adequately documented without the expertise of people whose lands and communities they serve, archaeologists tasked with identifying heritage in advance of resource extraction and land alteration projects often omit trails from assessments. Shortcomings in heritage conservation regimes in British Columbia and elsewhere are resulting in the obliteration of Indigenous trails at precisely the time they are needed to support the revitalization of Territory-Community relationships at the core of Indigeneity. We address this tragedy by integrating archaeology, ethnography, remote sensing, and collaborative fieldwork to document trails in Wet'suwet'en and Gitxsan Territories. This enables protection in heritage management contexts and renewed and expanded trail use in intergenerational and intercultural contexts in support of Indigenous community futurity, survivance, and shared senses of community, geography, and stewardship.

KEYWORDS

compliance archaeology, Gitxsan, heritage resource management, historical ecology, mapping, trail archaeology, trails, Wet'suwet'en

Resumen

A pesar de su inequívoca importancia en la historia regional y de su papel único en la transmisión cultural y en las tradiciones, los sistemas de senderos indígenas suelen ser ignorados en los regímenes de gestión de recursos patrimoniales no indígenas. Estos regímenes reguladores suelen exigir que el patrimonio tenga unos límites espaciales y temporales discretos y unos atributos y funciones materiales predefinidos. Sin embargo, como conectores a escala de paisaje de pueblos, lugares y tiempos que

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combinan funciones espirituales, económicas y educativas, los senderos desafían estas proscripciones. Los senderos evitan la identificación, documentación y conservación rentable. En consecuencia, y dado que los senderos no pueden documentarse adecuadamente sin la experiencia de las personas a cuyas tierras y comunidades sirven, los arqueólogos encargados de identificar el patrimonio antes de los proyectos de extracción de recursos y alteración de la tierra suelen omitir los senderos en sus evaluaciones. Las deficiencias de los regímenes de conservación del patrimonio en Columbia Británica y en otros lugares están provocando la desaparición de los senderos indígenas precisamente en el momento en que son necesarios para apoyar la revitalización de las relaciones entre territorio y comunidad, las cuales constituyen el núcleo de la indigenidad. Abordamos esta tragedia integrando la arqueología, la etnografía y la teledetección para documentar los senderos de los territorios Wet'suwet'en y Gitksan. Esto permite la protección en contextos de gestión del patrimonio y el uso renovado y ampliado de los senderos en contextos intergeneracionales e interculturales en apoyo del futuro de las comunidades indígenas, la supervivencia y los sentidos compartidos de comunidad, geografía y administración. [senderos, arqueología de senderos, cartografía, Wet'suwet'en, Gitksan, ecología histórica, gestión de recursos patrimoniales, arqueología de cumplimiento]

TRAILS AS ONCE AND FUTURE INDIGENOUS INFRASTRUCTURES

Trails, paths, roads, travel corridors, and related land uses constitute essential infrastructures in Indigenous Territories. Since Time Immemorial, these infrastructures have facilitated flows and exchanges of materials, peoples, and ideas, simultaneously reinforcing and animating Territorial identities and relations (Lake, 2013; Larkin, 2013). In North America, trails once included vast, interlinked physical manifestations of peoples' socioeconomic, cognitive, and spiritual geographies—networks without boundaries, if one considers waterways and coastal routes (Aporta, 2009; Dunbar-Ortiz, 2014; Snead, Erickson, and Darling, 2009; Turnbull, 2007). Despite their extraordinary historical and cultural significance, Indigenous travel networks have been and are being subsumed by industrial infrastructures across North America and elsewhere. The use and prevalence of trails are less common today, but are no less important in affirming, reclaiming, and maintaining Indigenous connections and commitments to one another, to health and quality of life, and to land-based lifeways (Deyo et al., 2014).

Historical and archaeological trails and travel corridors have been considered in diverse heritage resource management (HRM, also known as cultural resource management [CRM]) contexts. As part of the ɪdaà Heritage Resource Inventory Project, archaeologists working with Tłı̨ch̓o Elders have documented vast cultural landscapes by centering their work along the ɪdaà Trail (Andrews and Zoe, 1997). The prospects and challenges of trail archaeology have been reviewed in Ohio River and Mississippian period contexts (Schwarz, 2016), and ancient and historical trails have also been routed as the basis for public education and tourism, such as the Ala Loa National Historic Trail in Hawai'i (Mills, 2002) and the ʔEghé tu Lake One Trail in Wood Buffalo National Park (Peterson, 2018). Studies like those by T. J. Ferguson and Leigh Kuwanwisiwma (Ferguson, Berlin, and Kuwanwisiwma, 2009; Ferguson et al., 2020) exemplify the roles that trails play in community-based HRM, where the past is not merely informational but also relational (see Reo, 2019). In Hopi Territory, trails, like other archaeological sites, are considered monuments that warrant protection so that their "footprints" can be used to teach young Hopi about their inherited landscapes (Ferguson, Berlin, and Kuwanwisiwma, 2009). In the Canadian Arctic, trails form the basis of Inuit geographic and environmental practices, where "moving [is] a way of living" (Aporta, 2004, 2009).

Trail infrastructures literally allowed Indigenous societies to function and for places to be made and remade (Darling, 2009). As Catherine Fowler (2009, 85) reminds us, societies become comfortable in places, give them life through use, and in that process turn them into homelands. As much more than conduits enabling land use, trails often play unique roles in constructing Territorial identities and fostering connectivity on regional and interregional landscape scales. Trails "reinforce the right to move freely about the homeland, and provide a means to organize, delimit, and monitor movement ... trails help situate people, events, and stories in particular geographic contexts and temporal frames that all together contribute to the naturalization of nation" (Zedeño, Hollenback, and Grinnell 2009, 108). Tilley's (1994, 31) approach to landscape archaeology also emphasizes trails as the "medium for the routing of social relations." Trails are not merely thoroughfares; as Tewa scholar Gregory Cajete (2000, 204–5) explains, their use is emphatically relational. Steeped and embedded in territorial histories and cultures, trails are tools people use to continually reaffirm their relationships to land. The land, in return, uses people and trails to be kept open, enriched, and alive.

about documenting and protecting trails that are common in HRM regimes, we seek to boost both regulatory protections for and community uses of trails in the perpetuation of Territory and culture, and their manifold interrelations.

Gitxsan and Wet'suwet'en Trails

Gitxsan and Wet'suwet'en peoples constitute unique Nations with different linguistic and cultural traditions and distinctive governance structures, but are connected historically through marriage and other alliances and physically through the trails and travel infrastructures that bound both Nations across some 50,000 km² of their exclusively owned Territories. Before settler-colonial incursions into Gitxsan and Wet'suwet'en Territories, hundreds of kilometers of overland routes (and waterways) connected people actively trading, traveling, and moving across the region. In terms of material reality, trails and transportation corridors manifest in various ways. The former are usually defined as single-track pathways leading from villages and camps to harvest locales, lookouts, sacred places, and other sites on the landscape. Transportation corridors are more generalized routes, like river valleys and traversable ridge systems, often connecting watersheds or biophysical domains (e.g., the Interior and the Coast). Trail braiding, in which multiple parallel and overlapping treads define a route or corridor, is common in the region. Message trails used for expedient foot traffic between villages were once used to announce funerals, weddings, and feasts. All trails tend to follow the most direct routes, which are often also the most precipitous. Trails through meadows and wetlands are common, as people sought to avoid heavily wooded areas by "meadow hopping."

Certain trail networks in the Pacific Northwest are so distinctive that they form a unique class: grease trails. Grease trails refer to networks that people across the Northwest used to come together in early spring for eulachon (*Thaleichthys pacificus*) harvesting and trading (Johnson, 2010; MacDonald and Cove, 1987). Eulachon are an anadromous smelt that spawn annually in their natal streams and are renowned for their high concentrations of nutritious oil. Grease trails can refer to specific trails, like the 'Namgis Trail in Kwakwaka'wakw country (Stafford, 2007), or corridors like the Nuxalk-Carrier Grease Trails, connecting the BC Interior and Coast (Nuxalk-Carrier Grease Trail Steering Committee, n.d.). Not all grease trails were used exclusively for eulachon. In fact, these, and most trails, were nodes in complex networks of regional trade, migration, and communication systems. In Gitxsan and Wet'suwet'en Territories alone, these networks included at least 400 kilometers of maintained paths and associated structures. Cantilever and suspension bridges made of western redcedar (*Thuja plicata* Donn ex D. Don) formed part of trail infrastructures and were common in large canyons, including at places like Dałk Gylakyaw, Kyah Wiget, Sustut, Hagwilget, and Kitselas Canyon (McDonald, 2003; Johnson, 2010). In Gitxsan contexts, cottonwood (*Populus balsamifera* L.) logs were felled and used as expedient bridges across smaller drainages (Johnson, 2010).

BC archaeologists have remarked, "there is little available information on local trails, but all the evidence points to their being abundant" (Mackie and Eldridge, 1992, 16). George MacDonald collected a blend of regional ethnographic, historical, and archaeological data (MacDonald, 1984; MacDonald and Cove, 1987; see also Prince, 1998), inferring travel routes based primarily on the *adawx* (Gitxsan oral texts and histories; *kungax* in Wet'suwet'en) of Chief Nehl'xt and other historical records. MacDonald (1984) plotted 22 trails in Ts'msyen, Gitxsan, and Wet'suwet'en Territories and postulated that fortified camps were established along some grease trails to control trade. Many trails and corridors that MacDonald inferred are now subsumed by major highway systems in northwestern BC.

Laws and stories, like the *adawx* of Nehl'xt, outline peoples' lineage, histories, and rights to specific territories. Such rights are encoded from decentralized governance structures articulated by the *wilp* (Gitxsan) and *yikh* (Wet'suwet'en), corporate house groups that own specific fishing sites, hunting grounds, and other resource loci, including managed root and berry patches. Regulating the movement of people is a prominent component of Gitxsan and Wet'suwet'en law, with provisions for access, use, trespass, and reparations, and other stewardship rules (Daly, 2005). Oral texts and testimonies are foundational to the laws that grant and define various house groups' rights to use their Territory, and many such use rights are explicitly linked to trails and corridors. For example, Ridsdale recounted ancestral trail use in Tsayu Territory:

Then Kweese saved up for a large feast and invited warriors to join him in a battle against the Kitimat for killing his family. He also invited other Nations' warriors to join in the battle, at the feast Kweese handed out hide to those who joined him, this was for making moccasins for the war. For a year they trained for war. They trained in the low valleys around Driftwood creek, and in the mountains towards Morice Lake. When the war party was ready, they proceeded towards the Haisla Village along now what is called the Kweese War Trail....

The Haisla warriors fought back wounding many Wet'suwet'en, but eventually were killed. Everyone was killed in the village except for the messenger's family, they were spared. As a reward of battle, the Crests of the village was taken and given out to the participating warriors as Clan crest.... When the warriors were returning from battle, many were wounded and died, they were left where they lay along the Kweese War Trail, their spirits released. This is why the Trail is so important to the Wet'suwet'en, the ancestors who fought for our freedom, the very Crests that we wear on our backs, the story's linkage through the actual trail that you can see.

This is what it means to be Wet'suwet'en, this is why we wear the Crest on our backs to honor all past Wet'suwet'en. When we receive our Wet'suwet'en names, in the feast hall, there are songs attached to the names being passed on. When the songs are sung it brings our ancestors in to dance with us, it lifts up the name, and it lifts up the person receiving the name. The attachment to the Territory is always attached to songs. The Crests are attached to the War, if you destroy the trail you will destroy our history. What good is a song if you cannot bring our ancestors in to dance with us.

Trails and route-specific migrations are major themes in Gitksan and Wet'suwet'en histories and are repeatedly implicated in wilp/yikh and clan structures, which, despite colonial impositions, thrive today as the fundamental units of social and political organization (Daly, 2005). Seasonal movements to and from house territories, along with access to lands and resources, are strictly regulated both internally and pursuant to the Delgamuukw-Gisday'wa decision in the Supreme Court of Canada (Delgamuukw v. British Columbia, 1997).

Trail Archaeology

Documenting trails in Gitksan and Wet'suwet'en contexts requires the critical integration of relevant adawx/kungax and a landscape-scale perspective and methodological approach. This approach rejects the need for discrete and minimalist boundaries (e.g., project and heritage site "footprints") and other attempts to "cadastralize" Indigenous Territories and lived landscapes (Gitksan Lax'skiik, 2001; Pinkerton, 1998). Our strategy for trail archaeology is infused with the local knowledge and ontologies that define and animate regional cultural geography. This approach requires co-documentation of activity hubs (e.g., camps, villages, harvest locales), historical events and processes (e.g., migrations, wars, other oral texts), and ongoing trail uses and relations. These are mapped to assure that, to the extent practical, the tangible and intangible dimensions of trails are recognized and their connections to landscape and community are respectfully considered.

Heritage resource management surveys and archaeological assessments that focus only on physical aspects of trails, implicitly discounting ethnographic and historical accounts, invariably fail to identify the full extent of trails or to convey the full range of associations and values. Scale, seasonality, and topography are challenging aspects of trail archaeology for heritage professionals less familiar with the cultural and geographical contexts they are assigned to investigate. Trails are sometimes elusive; they can run from dozens to hundreds of kilometers. Even within a single territory, trails are diverse. Summer trails are hardpacked and easier to identify than winter travel routes, which disappear after snowmelt. Wetland or meadow trails are common but often obscured when not used for a year or two. Auspiciously, many adawx/kungax feature insights about trails and trail-related heritage, some of which are geographically explicit. It remains for heritage professionals to consult these materials as required steps in HRM regimes, as discussed below.

The first step in trail archaeology fieldwork is the identification and mapping of trail segments. Trail networks and associated sites cannot be comprehended until the individual segments that make up a single track or network are documented. This typically requires collaborative investigations. In light of emerging recommended practices for when and how to document and assess the significance of Indigenous heritage trails, even in the Northwest's challenging biophysical landscapes (see next paragraphs), the destruction of even one trail segment without the free, prior, and informed consent (FPIC) of Indigenous Territory Owners is negligent. In BC, where lawmakers have formally incorporated the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), called the Declaration on the Rights of Indigenous Peoples, FPIC is mandated by provincial law, and as such, this negligence is also contrary to the legal statutes and implementation of the DRIPA.

Gitksan and Wet'suwet'en Territory Owners know the locations and histories of previously and currently used trails. These trails are often associated with subtle terrain discontinuities that are readily identifiable only to those with perceptive faculties honed through use of the trails their ancestors built and maintained across centuries, even millennia. Nonlocal archaeologists and other heritage professionals are seldom qualified to document and assess the significance of these heritage sites without local guidance.

A primary finding from our research is that trail archaeology in Gitksan and Wet'suwet'en Territories, and likely elsewhere, requires a mix of community-led collaborations, pedestrian surveys, and imaging and mapping technologies. Remote sensing data from drones, satellite imagery, LiDAR, and historic air photos are particularly useful in the early stages of identifying potential trails and trail segments. Ferguson, Berlin, and Kuwanwisiwma (2009) outline principles for identifying and interpreting trails using remote sensing. First, obvious linear features (rectilinear or slightly curvilinear patterns) that ignore minor topographic irregularities, the "straight as an arrow philosophy," are flagged. Second, trails are likely to leave a series of discontinuous segments. In northwestern BC, trails along rivers are often subject to erosional and depositional processes; aerial imagery is useful for connecting discontinuous trail segments in these contexts. Third, the heavy and long-term use of trails can result in what Sheets and Server (1991) call *troughing*, potentially visible with LiDAR and other remote sensing tools. With expanding access to technology and LiDAR data, remote sensing in archaeology is moving away from its focus on topographically distinct features and monumental architecture and toward the identification of more subtle sites, including trails (e.g., Davis, 2021). Our remote sensing reconnaissance helped us target likely travel routes (e.g., linking through meadows) and other geological features (slope breaks, avalanche chutes). Results from these studies are ground-truthed, affording opportunities to distinguish anthropogenic trails from game trails, linear drainages, and vegetation anomalies.

Ethnographic and historical records are essential complements to understanding the roles and significance of trails in landscape land-use histories and archaeologies. Fowler (2009) shows how Southern Paiute-Chemehuevi place names associated with trails and other Indigenous systems of trail-linked stories and nomenclature often outlast physical trails. Similarly, Darling (2009) demonstrates how O'odham songs constitute "cognitive maps" that encode trail locations through sequenced references to major landscape features. Additional research in the American Southwest, from Chaco Canyon to the Sea of Cortez, has advanced trail archaeology methods and community collaboration (Becker and Altschul, 2008; Hopkins et al., 2019; Kantner, 1997; Wright, 2022). These studies integrate remote sensing technologies, local knowledge, ethnographic records, and pedestrian surveys with the goal of contributing to Indigenous-led stewardship and land-use goals. As such, the most essential component in the archaeology and management of Indigenous trails is that it be done by and for the people whose ancestors built them. As Snead, Erickson, and Darling (2009) emphasize through references to "landscapes of movement," and as underscored here, full understanding of trails requires open-ended and open-minded engagements with local cultural and geographic contexts.

METHODS

Our study drew on localized knowledge and expertise from Gitxsan and Wet'suwet'en researchers and Elders combined with archaeological and historical-ecological data. Our investigation of trails in two contexts, Madii Lii and Talhdzi' Wiyez Bin Territories, created a relatively replicable methodology for identifying and documenting ancestral trails, with the purpose of emphasizing community goals and objectives (futures) over resource development. Both Territories are being altered by oil and gas infrastructure without the consent of the wilp/yikh community. It is in this contested context that proponent-sponsored archaeological assessments (and failures to assess) led to the destruction of trails in Talhdzi' Wiyez Bin. Therefore, our methods emphasize principles of ethical engagement (Marek-Martinez, 2021; Velasquez Runk, 2014) and the witnessing, documenting, and reporting of failures in the archaeological assessment process that enabled the destruction of Wet'suwet'en cultural heritage.

Study Sites: Babine Trail, Madii Lii-Luutkudziwus and Kweese War Trail, Talhdzi' Wiyez Bin-Tsayu Clan

The Babine Trail network is a travel corridor in northwestern BC that traverses roughly 80 km of the Babine Range, from the town of Hazelton to Babine Lake. Our work focused on trails and trail segments in Lax'yip Madii Lii (Madii Lii Territory), one of two Territories of Wilp Luutkudziwus-Xsim Wits'iin (a Gitxsan house group). These Territories lay within the Gitxsan region, which encompasses most of the Upper Skeena Watershed, the second-largest wild-salmon-producing river in Canada. Madii Lii Territory (354 km²) is a mountainous zone along the north bank of Wii Sas Goo (Suska River), which drains into the Bulkley River, the Skeena River, and the Pacific Ocean. Wii Sas Goo cuts through the Babine Range, connecting the Coast to the Interior. The length, abundance of deeply incised tributaries that limit parallel travel on ridge systems, and steep-sided hillslopes of the Suska Valley all contribute to its importance as a travel corridor.

Our second case study, the Kweese War Trail, is in Talhdzi' Wiyez Bin, Kweese Tsayu Territory. The Kweese War Trail is a discrete trail with segments running northwest of the confluence of three major river systems: Talbits Kwa (Gosnell), Te't'aay Kwe (Thautil), and Wedzin Kwa (Morice). The trail veers toward the Upper Clore River in the eastern Kitimat Ranges. Kweese, a Tsayu Clan Chief (and namesake of the trail), owns, manages, and stewards Talhdzi' Wiyez Bin Territory. Talhdzi' Wiyez Bin is in a Coastal-Interior transition zone characterized by deep snowpack resulting from Pacific weather systems and winters prolonged by continental air outflows. The Morice system is the largest and most important sockeye salmon (*Oncorhynchus nerka*) stream in the Bulkley basin (Gottesfeld and Rabnett, 2008). Stands of lodgepole pine (*Pinus contorta* Douglas ex Loudon), an important food tree, are extensive, particularly on on-stream terraces and south-facing slopes (Rabnett, 2001). Small areas of grassland and shrub-steppe occupy warm, dry sites scattered along the Morice River and other major tributaries.

Local Expertise and Historical Research Methods

Local expert knowledge about the Babine Trail and Kweese War Trail was compiled, analyzed, and geo-referenced. We integrated information from previous land-use studies, cultural heritage reports, and interviews with Elders and knowledge holders conducted since 1980. We assessed references and spatial information relating directly to these two trails and incorporated relevant place names, campsites, harvesting locales, and other historical-ecological and land-use data. Legal research and expert witness reports from the *Delgamuukw-Gisday'wa v. British Columbia* (1997) court case were also useful. These wilp/yikh documents include testimony from Chiefs Kweese and Luutkudziwus, both of whom were plaintiffs in the case. Many of the documents from the case are publicly available online.² We accessed other relevant reports, maps, and interviews through the Office of Wet'suwet'en research library in Smithers, BC.

Data from historical land surveys were compiled alongside Wet'suwet'en and Gitxsan records. These included the Indian Reserve Surveys and the exploration and land surveys of Frank Swannell, which provided evidence of historical Wet'suwet'en land use throughout the mid-Morice watershed, including Tsayu Territory (Swannell, 1924). We also compiled reports from Hudson's Bay Company traders who, in 1822, established Fort

Kilmaurs (later Fort Babine) at the eastern terminus of the Babine Trail. All mentions of the trails or land use along trails were compiled and, where possible, geo-referenced.

Important information also came from one of us (Ridsdale) who has the designated authority to speak about the Kweese War Trail, a duty and privilege enshrined in his *cin k'ikh* (meaning “trail of songs”). The term *cin k'ikh* captures the responsibility of Ridsdale and other house members to learn place names, sites, trails, and events in their Territory’s history. This knowledge is mapped (mentally), used, and passed on. In Wet’suwet’en contexts, such knowledge is highly regulated intellectual property, effectively representing title to the land and the plants, animals, and other resources therein.

Historical-Ecological Data and Mapping

Remote sensing data, including historical Google Earth Pro (ver. 7.3) satellite imagery and historic air photos (UBC Geographic Information Centre) spanning an average of nine decades, were collated and analyzed for linear features. Two helicopter surveys (one in each Territory) between 2019 and 2020 allowed for aerial reconnaissance for landscape indicators of trails (e.g., linear features, high benches, canyons, etc.). We followed clues from the reconnaissance work, using pedestrian surveys. Once a tread or other trail indicator was identified, we “chased” it onto likely landforms, making notes on locations ruled out as trail hosts. Trails along rivers were often obscured by past flooding. Where a trail faded or anthropogenic signatures, like culturally modified trees (CMTs), diminished, we typically inferred and followed the likely route (staying on a straight line between high bends in the river, following meadows) until we located another segment.

We recorded nonnative and distinctive flora along corridors. Given the widespread use, management, and translocation of vegetation in Gitxsan and Wet’suwet’en traditions (Gottesfeld, 1993, 1994; Johnson, 2000, 2013; Turner, Armstrong, and Lepofsky, 2021), noteworthy vegetation was flagged and recorded as a potential signature of trails and other anthropogenic activity. Because many trails in BC were converted to packhorse trails in the mid-1800s, the potential for invasive vegetation from feed and other settlement activities also offer potential movement markers.

Archaeological Data

Registered archaeological sites in BC are spatially archived in the Remote Access to Archaeological Database (RAAD). Using the spatial search query, we inspected previously recorded archaeological sites and noted those in proximity (~200 m) of either trail. These locations were collated for analysis in conjunction with historical and local expert data layers. Our pedestrian field surveys used the Avanza Map™ GPS application to record trails, distinguishing among segments that were confirmed as anthropogenic, inferred, or seen as likely game trails. We recorded all indicators of land use, including CMTs and (especially with blaze scars) cultural depressions, campsites, exposed midden, and postcolonial artifacts like metal nails and glass. Trail segments with linear depressions, or sections that appeared “cut” into a slope, were flagged, and the width, depth, and azimuth were recorded. We used a soil core sampler to assess trail segments that appeared modified, collecting four cores on the tread and four control core samples two meters from the inferred centerline (n = 8 cores). Finally, we collected site forms, reports, email exchanges, and other files detailing archaeological work associated with the Coastal GasLink pipeline project in Tsayu Territory from 2013 to 2020.

RESULTS

Local expert records and archaeological and historical-ecological data showed that both trail networks were repeatedly used and significant features of Gitxsan and Wet’suwet’en landscapes, past and present. Both trails were associated with archaeological features, especially CMTs, cultural depressions, and campsites. Information about the Kweese War Trail was especially rich because of its ongoing importance for community members. The Babine Trail has a rich written record due to its use in the early Hudson’s Bay Company fur trade and during the Omineca Gold Rush, beginning in the mid-nineteenth century. Table 1 summarizes evidence for each trail.

The Babine Trail

There were no registered archaeological sites recorded in Madii Lii Territory. However, in adjacent Lake Babine Nation Territory, on the eastern side of Babine Lake, are over 200 previously recorded archaeological sites, including two trails: the Nilkitkwa River Trail, divided into three sites based on its size (GjSp-8, GiSp-23, and GjSq-2), with two adjoining segments, and the Wud’at or Takla Grease Trail (GhSp-47), which was identified by locals and then mostly bladed from BC Hydro construction. It was possible to compensate for the dearth of archaeological data in Madii Lii by close

TABLE 1 Evidences

Method/Line of Evidence	Babine Trail	Kweese War Trail
Oral texts	X	X
Previous research by Indigenous community	X	X
Historical documents	X	X
Travel corridor	X	X
Linear or curvilinear trail features (aerial photographs)	X	-
Linear, curvilinear trail segments (pedestrian survey)	X	X
Linear depressions	X	-
Evidence of clearing (stones, debris, felled CMTs)	X	X
Inference using multiple trail segments	X	X
Blaze marks/CMTs along trail	X	X
Evidence of fill and terraforming	X	-
Other archaeological sites (lithic scatters, petroglyphs)	X	X ¹
Invasive/exotic or unique plant species	X	X

¹While some new sites, like CMT clusters and lithic scatters, were recorded along the Kweese War Trail, potential associated sites such as burials and campsites (see below) were not investigated because of Coastal GasLink pipeline construction.

scrutiny of sites recorded in Babine Territory and the colonial and ethnographic accounts of the Territory's land use and occupation (Daly, 2005; Trusler and Johnson, 2008). We recorded four berry camps, two fish camps, seven homeplaces/camps, blanket traplines, one petroglyph site (Nox Nox Loobit), and 23 toponyms. Despite the dearth of provincially recorded sites in the territory, evidence of occupation, land use, and movement throughout was common.

Segments of the Babine Trail were associated with topographic features like creeks. For example, a section of trail associated with Xsa Anax Slin was recorded by Ben McKenzie Sr. (then Luutkudziiwus) in 1979. Locally known as Twenty Six Mile Creek, McKenzie remarked that Xsa Anax Slin was a section of the Babine Trail, where the trail steepened going in and out of the creek. Mary Moore's map for her affidavit in the Delgamuukw-Gisday'wa case notes a homeplace called Anx Milit. This is a spring fishing station for steelhead, where nets were placed under the ice. She says that the homeplace was directly on the Babine Trail, where the trail came down to the Suskwa River, until the massive bank failure in the mid-1900s.

During precolonial times and during the mid-1800s, the Babine corridor was an important throughway, facilitating the movement of people and goods in and out of Fort Kilmaurs/Babine to the Coast. One early colonial account was written by William Downie of the Hudson's Bay Company in 1859. Traveling up the Skeena River, Downie described the Babine as "A fine trail through a beautiful country ... we came across plenty of Indians loaded with berries" (Downie to Douglas, C.C., Oct 10, 1859 [Downie, 1893]). A decade later, the Omineca Gold Rush brought a flurry of miners up the Skeena River and through the Babine. In 1870, approximately 50 miners completed the journey across the trail, noting the length and quality of the trail (Trueman, 1935). By 1880, the HBC had set up a fort in Hazelton, and tens of thousands of pounds of sugar, flour, and other provisions were packed through the Babine Trail annually, mostly by Gitksan and Dakelh packers (Dawson, 1879).

Since 2000, Wilp Luutkudziiwus has conducted heritage surveys and monitored cultural heritage and land-use sites in Madii Lii Territory (Gitksan Watershed Authorities, 2004). Our pedestrian surveys (2018–2020) relocated portions of previously recorded trail segments. Some segments included nearly half a kilometer of packed paths with abundant CMTs. One 50 m segment was delineated by six blaze-scarred CMTs through a meadow. One 180 m segment had four CMTs with double blaze scars (each tree having a blaze on both sides). Braided trails (two to five roughly parallel treads) were common. We sought to connect segments of trail by following them in multiple directions. Some segments turned out to be game trails; others were confirmed to be anthropogenic by the presence of CMTs. The Babine Trail tended to follow high bends in the river through easy-to-walk forests and meadows (probably from previous anthropogenic burning) and steep slopes, leading to known berry camps, some with cultural depressions indicating long-term and likely repeated use (processing and/or storing foods). Where trails faded out, we used paper maps to interpolate between well-documented segments and infer and chase the route.

In one instance, while following an inferred trail, we identified a long bench apparently cut into a slope and filled and flattened with cultural materials like fire-altered rock, lithic debitage, and black midden-like soil (Figure 2). Exposed fire-altered rock ($n = 37$) and flakes ($n = 4$) were geo-referenced, counted, and photographed in accordance with the "catch and release" minimum-impact protocols adopted in our work and elsewhere (Gonzalez, 2016). Roughly 60 m from the filled trail segment, nonnative plant species like rhubarb (*Rheum* sp.) and burdock (*Arctium* sp.) were identified, as were stinging nettle (*Urtica dioica* L.), all species commonly associated with colonial homesteads and/or packhorse feed.

The helicopter surveys provided us with expansive, landscape-scale perspectives of our study areas. For example, the view from the air revealed that the north side of the Suskwa River was more suitable for travel than the south side, where the terrain was steeper and more dissected. We



FIGURE 2 Top left: soil cores from terraformed trail segment showing roughly 15 cm of midden fill on top of large cobbles and fire-altered rock. Top right: soil cores directly adjacent to trail (~2 m) with normal organic soil formation (moder humus forms) above sandy-silty subsoil. Bottom left: terraformed trail segment facing down-slope with exposed midden fill. Bottom right: exposed fire-altered rock and lithics on the trail was counted and photographed. (Photograph by Chelsey Geralda Armstrong) [This figure appears in color in the online issue]

therefore confined our pedestrian reconnaissance to the north. In two instances, we observed trails in open aspen (*Populus tremuloides* Michx.) parkland from the air. These were then ground-truthed and mapped. Helicopter support also enabled access to otherwise remote terrain. We located a trail segment above the tree line, an area that otherwise would not have been visited. We landed the aircraft and found a well-packed trail with troughing, averaging 15 cm in depth. After one hour of chasing this trail, we located the only bona fide colonial trail marker found thus far: two pieces of wood joined with a nail atop piled rocks (Figure 3).

The Kweese War Trail

In the 1920s, settler surveyor and diarist Frank Swannell wrote detailed accounts of specific “Indian trails” in the vicinity of the Kweese War Trail. He occasionally chased these trails and widened their treads for his own purposes.



FIGURE 3 Alpine trail with linear depressions and marker in Lax Yip Madii Lii. (Photograph by Chelsey Geralda Armstrong) [This figure appears in color in the online issue]

All our supplies and camp outfit we packed directly from Morice [Lake] to Atna Lake over an old Indian portage. It was originally cut sixty-four years ago, reblazed ten years ago, and is about a mile long ... wretched Indian lean-to at the end of this trail... Fenton [and] I follow old trail to large lake 35 ft. above Morice Lake. Evidently old Grease Trail, old blazes 65 years old, reblazed 10 years ago. (Swannell, 1924)

Frequent mentions of trails in Swannell's diaries illustrate how the Morice River Watershed was a travel hub with multiple overland routes used in various seasons. In addition to mapping segments detailed by Swannell, we relocated trail segments north of the Morice River, from Lamprey Creek to Morice Lake. Two further segments along Lamprey Creek, from the Morice River to McBride Lake, were also mapped. Ridsdale conducted previous fieldwork on the Kweese War Trail and associated trails, including the Morice River Right Trail, Morice Lake Trail (Northwest perimeter), Lhet Lii'nun Teezdlii (Village and trail hub), and the Cabin Creek Trail (Office of the Wet'suwet'en, 2001, 2010).

According to local experts, trails were typically used for trade, access to house members' seasonal fish and berry camps (from major village centers like Kyah Wiget), and access to saltwater fisheries (Rabnett, 2001). Consistent with oral testimony, the Kweese War Trail was the only trail in the Gosnell watershed to reach Kitimat. To pinpoint which trail segments were part of the Kweese, Ridsdale conducted interviews with Hereditary Chiefs holding titles to the surveyed lands, including Chief Woos (Cas Yex) and Chief Caspit (Yextsowiten-C'inniggit Nenikeyh). They confirmed that the Kweese was a meeting place for southern Wet'suwet'en (called Uyenii) at an old village site near the confluence of the Burnie River and Clore River (toward Kitimat). Ridsdale and colleagues sought out trails that fit this narrative and located four segments of the Kweese War Trail that ran above Gosnell Creek to the meeting place at the confluence of the Burnie-Clore.

In 2019, we surveyed the Kweese from Talbits Kwa (in adjacent Unist'ot'en Territory). We accessed the fieldsite via the Shea Forest Service Road, a previous Wet'suwet'en trail subsumed by the Shea logging road, where a Coastal GasLink man-camp was being constructed in 2019. We continued on foot, following Gosnell Creek. By staying on high bends above the river, we confirmed two Kweese trail segments previously identified by Ridsdale (Figure 4). We documented 11 additional CMTs (blaze scars $n = 9$ and kindling trees $n = 2$), and two trap boxes. Previous archaeological surveys recorded a lithic scatter near the trail segments (but the trail was not recorded). Because the Kweese War Trail is commonly known to be associated with burials, more work was scheduled for the following summer. In 2020, we returned to the Kweese War Trail to locate more segments of the trail (up to the Burnie-Clore confluence) and to identify other archaeological sites associated with Tsayu cin k'ikh, primarily searching for burial indicators and camps. We were unable to complete our work because the thoroughway was destroyed by Coastal GasLink construction crews.

Between 2014 and 2019, as part of consultation meetings and document exchanges prior to the start of the Coastal GasLink pipeline construction, Ridsdale and the Office of the Wet'suwet'en communicated the presence and significance of the Kweese War Trail. In 2014, Ridsdale brought BC Parks officers to the Kweese War Trail site to witness and showcase the importance of the trail and its relevance to community members today. Despite this, in a 2016 report, Coastal GasLink archaeologists denied the presence of the Kweese War Trail, claiming it was a game trail.



FIGURE 4 Ridsdale pointing out a culturally modified tree along the Kweese War Trail. Right: A trail segment located en route to the Burnie-Clore River confluence, just above a mountain pass that connects Wet'suwet'en to salt water (Douglas Channel). (Photograph by Mike Ridsdale) [This figure appears in color in the online issue]

It should be noted that flagged 'cultural heritage trails' were observed around the study area. These were flagged by other archaeological consultants [some authors of this article] on a different project and after surveying the ribboned 'trail,' it was determined to not be archaeological (or a trail at all). It should be noted that this area is not near Burnie Lakes and the portion of the area closest to the Burnie River is very steep and treacherous ground. This led to us giving the area a low archaeological potential rating. (Kleanza Consulting Ltd. and CH2M Hill Energy, 2016)

The archaeologists' inattention to local expertise and previous in-house research allowed for pipeline construction crews to bulldoze and destroy the Kweese War Trail. For example, CGL archaeologists ignored the fact that Wet'suwet'en trails often traverse steep terrain. Furthermore, local archaeologists in the region have previously recommended that, in ascertaining the potential for sites using models, "slope be removed from the buffer ... [a]rchaological sites within the Morice Forest District, especially CMT resources, do not vary predictably with the slope classifications" (Clark, 2002, 20). We challenged the above claims made by CGL archaeologists—through calls to action and cease-and-desist orders filed to Coastal GasLink, the BC Archaeology Branch, and BC Oil and Gas Commission—but these were ignored.

Road construction proceeded; yet, when we returned to the site to assess damage in 2021, remnants of the trail had been flagged. Pink flagging and signs that read "Heritage Trail" were noted along short (~10 m) segments of trail that were still visible amid the construction debris. CGL archaeologists denied the existence of the trail before construction, then appeared to acknowledge it once construction crews got what they wanted. In June 2022, a new team of archaeologists (the fourth firm to be brought onto the project) requested the presence of Wet'suwet'en monitors for the proposed mitigation of the remnants of the destroyed trail.

One of us (Armstrong) and Chief Knedebeas (from Dark House, the house territory adjacent to Tsayu) went to the site. With pipeline construction proceeding and with security crews and RCMP surveilling, we monitored CGL archaeologists as they recorded segments of trail that were still visible. Most of the remaining trail segments were completely inundated, likely due to poor road construction—missing or misplaced culverts and lack of erosion control led to numerous slope failures, erasing most remaining segments of the trail (Figure 5). CMTs with their protective ribbons still attached to the trunks had been felled, indicating that damage to the trail was knowingly done. Most of the visible segments of the Kweese War Trail are now obscured by the new road. The recently arrived archaeologists, having only worked on the project for a few days, claimed that the trail could not be protected because it did not pre-date 1846, the benchmark for automatic protection under the Heritage Conservation Act. This was confusing to us—why were they mitigating and monitoring a site if it was not a site? Why would mitigation only occur after the site was destroyed? The archaeologists further claimed that the trail would return to its original form within a few years. But in Ridsdale's own words:

It's not just a loss of archaeological information. It's that connection that we need, and those stories, that connect our stories to the landscape. Like the Kweese War Trail is part of my history, and we talk about that. But how can I take a young fella out there and say, this is your land, walking in the footsteps of your ancestors. But by the way, don't look at this right-of-way where it cuts right across the trail, ignore the loud compressor station, don't look at that. It's the worst thing possible, it takes away the spiritual connection. And you know, when those people passed away and died on the landscape, it bears mind to Remembrance Day. Cause our warriors died to protect our freedom and we commemorate that. But this is how they're treated.



FIGURE 5 Culturally modified trees with blaze scars felled by construction crews. Consultant archaeologist observes destruction of Kweese War Trail (flagged on right) beside Coastal GasLink road construction in 2022. Pipeline road built over sections of the Kweese War Trail in 2020; note aurhots Ridsdale and Spice (right) on small segment that survived the construction but will ultimately be obscured from brushing. (Photograph by Chelsey Geralda Armstrong) [This figure appears in color in the online issue]

The significance of the Trail is that the Kweese War Trail was where the Wet'suwet'en received many of our Crests that are our symbol of who we are as a people, our Clan Crests and our cultural identity. Many of those who fought in that war were wounded, and where they died along the trail is where their spirits were released, their body travelled no further. The spiritual connection of that trail is unique and should not be disturbed. As well, the burials will need to be identified and marked as such in order for Wet'suwet'en protocols to be followed in the present day.

Other archaeological sites along the Coastal GasLink pipeline route have been unlawfully destroyed and investigations into wrongdoing have been undertaken entirely by house members and volunteers (Sutherland-Wilson, Spice, and Geralda Armstrong, 2019). Coastal GasLink has already had a number of convictions for issues of noncompliance regarding the Environmental Management Act but none regarding infractions of the Heritage Management Act.

DISCUSSION

As Patricia McCormack (2017) notes in her work on Indigenous trails in Northern Alberta, the failure of consulting heritage professionals and regulators to adequately document and protect trails reduces communal uses of culturally important spaces and further decimates already

fragmented landscapes. Both trail networks in our study continue to be frequently utilized by community members for a host of year-round cultural and livelihood practices, including fishing, hunting, trapping, plant harvesting for foods and medicines, and cultural immersion camps. The repeated discounting of the historical and ongoing significance of trails in Gitksan and Wet'suwet'en Territories reflects larger issues in heritage management and the continued privileging of settler-colonial values and futurities, especially profit-driven industrialization, over those of Indigenous communities (Spice, 2018).

Trails are ideal contexts for interrogating the tensions between settler-colonial and Indigenous values and futurities. More than ancient travelers' paths or heritage resources subject to impact mitigation through archaeological excavation, trails form potent and persistent reminders of the seamlessness of Indigenous America. As integral parts of a "usable past" (Stump, 2013), trails continue to serve as essential venues for community knowledge transmission and land-based healing. Trails, like other heritage, are not consigned to a stagnant past, but continue to be valued and used as transformative spaces where futurities are dreamt up and (re)emerge (Deyo et al., 2014).

Wet'suwet'en and Gitksan futurisms are enacted and practiced on trails (including rivers and water travel); local knowledge is shared; privileged knowledge is mobilized; geography is taught; characters, minds, bodies, and communities are strengthened and integrated. The BC Heritage Conservation Act provides for "the protection and conservation of heritage property in British Columbia" that possesses "historical, cultural, aesthetic, scientific, or educational worth or usefulness." Despite this sturdy statutory foundation and the unmistakable values of trails in Indigenous economic, cultural, and spiritual activities, professional archaeologists and provincial regulators are failing to consider and safeguard these extraordinary assets for understanding the past and shaping desired futures.

Ignoring Wet'suwet'en and Gitksan values and interests in managing and protecting heritage resources in favor of settler-colonial ones reflects still-institutionalized means of colonialist violence and oppression. Trail erasure continues to transform Territory from a cultural *place* into an extractive *space*. Cree scholar Priscilla Settee (2008) observes that today's energy and mining extraction and the race for Earth's precious resources is "the new conquistador." Quests for the commodification and industrial transformation of Gitksan and Wet'suwet'en Territory have plagued the same communities since the first trappers and gold miners made their way up the Skeena River, and the same underlying tensions threaten Gitksan and Wet'suwet'en communities and futurities today. As of summer 2022, Wet'suwet'en matriarchs, Elders, families, and youth are still being excluded from their Territory, surveilled by police and Coastal GasLink private security firms, and made vulnerable in these unsafe environments. Our primary conclusion is that this violent and apparently illegal prioritization of industrial interests over those of Indigenous Territory Owners needs to stop.

Methodology is not the problem. Our studies demonstrate that the challenges to trail archaeology are more perceived than real. Indigenous community collaborations, coupled with readily available technologies and fieldwork diligence, enabled trail identifications and assessments. Trail research and documentation is a rapidly advancing global subfield of archaeology (Alcock, Bodel, and Talbert, 2012; Aporta, 2009; Hyslop, 1984; Ferguson et al., 2020; Gonzalez, 2016; Snead, Erickson, and Darling, 2009). By combining local expertise, context-sensitive reconnaissance, and remote sensing with high-precision field methods for site documentation and assessment, many of the impediments to trail archaeology are overcome. This is especially true where community leaders, like Ridsdale and Richard Wright (Madii Lii), already command extensive and relevant knowledge of their Territories. Our trail work overcame concerns with *efficiency* while also demonstrating greater *effectiveness* by identifying other types of archaeological heritage in both Territories. It came as no surprise that "trail chasing" led us to previously unrecorded sites. We understand that this tactic could be challenging for professionals working under prevailing HRM regimes, where project boundaries define heritage inventory boundaries and discourage the documentation of heritage that does not readily match regulatory definitions. But with overdue increases in both political power and technical capacities on the parts of Indigenous governments, new opportunities are emerging.

Because assigning absolute dates or date ranges to trails will always be challenging, all available evidence must be considered. The lack of protection in BC for sites that postdate 1846 is a prime example of the importance of either dating trails or gaining support for the reasonable presumption that all interregional Indigenous trails in BC pre-date 1846. Oral texts recounting the wars with the Kitimat pre-date settler colonialism and connect the physical trail to the oral testimonies confirm the Kweese was a precolonial trail. Downie's record of the Babine Trail notes intensive and widespread use in 1859. It seems unlikely that people refrained from using this prime corridor until 1846. Because CMTs linked to the Kweese War Trail did not meet the HCA cutoff date, archaeologists did not argue for protecting the trail. Perhaps needless to say, CMT dates provide only a minimum age for trail use, not initial trail construction. Other lines of evidence confirming precolonial use of the Kweese War Trail were ignored until after landscape-scale destructive alteration had occurred. Additionally, evidence for the use of the trail by moose and other animals—uses that the Wet'suwet'en consider part of a *social* relationship to the animal world—was presented to claim the trail was not anthropogenic. If Indigenous ways of knowing had been honored, the co-use of Indigenous trails by humans and nonhuman animals would have been understood as evidence of cultural significance. The status of the trail as a registered heritage site and its future roles in service to Wet'suwet'en Territories and communities remains uncertain.

CONCLUSIONS AND RECOMMENDATIONS

Archaeologists are slowly coming to terms with the truth that we do not study a universal human past. The sites and artifacts we study are peoples' homes and belongings and ever-vital "footprints" and tangible reminders of sorely tested but still-unbroken connections across time and space.

Heritage management issues raised in McCormack's (2017, 113) study of trail archaeology in Alberta are at least equally problematic in northwestern BC, where "one would assume archaeologists are champions of the full picture of Indigenous land-use history." In reality, at least in the case of the Coastal GasLink pipeline, the BC government and CGL archaeologists are deeply implicated in the destruction of Wet'suwet'en homes and property. To date, cultural and archaeological heritage has not been adequately mapped, documented, or acknowledged by archaeologists working in Wet'suwet'en and Gitksan Territories. However, in both cases, through internal community initiatives and organizing, we have successfully documented trails, CMTs, important harvest sites, and other cultural heritage that regulation-driven archaeologists missed or ignored. Our experience is the basis for eight concluding recommendations to heritage professionals and regulators:

1. Implement DRIPA: Free, prior, and informed *consent* by Indigenous Territory Owners is required for any alteration of, or extraction from, their Territories. Consultation is not consent.
2. Resist colonial attitudes and customs: Stop work if consent has not been granted. Individual professionals are well positioned to help thwart continued attempts on the part of regulators to emphasize state power to the detriment of Indigenous Territory Owners and on the part of industrial project proponents to limit consultation/communication with Indigenous Owners.
3. Demonstrate respect, agility: Archaeologists and other heritage professionals bestowed with authority to determine what materials are and are not given protective consideration should balance those extraordinary privileges with duties to the ethical mandates noted above and to reflexivity and humility.
4. Archaeologists operating in others' Territories are consultants, not experts: Virtually all Indigenous Nations maintain expertise, and heritage professionals would do well to cultivate the deferential respect that is fundamental to accessing knowledge regarding the full range of heritage and heritage values embedded in areas slated for heritage assessments.
5. Leave no data behind: Heritage professionals charged with assessments should leave no stone unturned in discharging responsibilities to identify and assess the full spectrum of heritage and associated heritage values. Regulatory regimes in BC and elsewhere promote "echo chambers," in which heritage professionals endlessly recycle culture histories and other boilerplate, failing to demonstrate critical thinking and essential scholarship and to attend to the wealth of information available from Indigenous responses to consultations, oral histories, traditional-use studies, and litigation transcripts and affidavits.³
6. Slow down: Heritage professionals and regulators should push back on industrial proponent timelines when these are at odds with maintaining relationships with Indigenous Territory Owners, with the completion of thorough heritage assessments, or both.
7. Get help: Heritage professionals in BC work at the dynamic interface of inherently conflicting demands from Indigenous Territory Owners, industrial clients, state government regulators, and disciplinary colleagues. Despite the increasing sophistication of conflict-resolution mechanisms, these are seldom invoked. One approach would involve a multiparty agreement, crafted in the early stages of planning major land alteration and resource extraction projects, on when and how to trigger conflict management.
8. Look forward: Surveying and documenting Indigenous heritage should include the prioritization of current and future use of Indigenous lands by Territory Owners. Attention to Indigenous futurities include supporting full access to and use of ancestral Territories, including the ability to travel on these trails and tell future generations about the stories they embody. When heritage professionals contribute to the destruction of trails, they sign on to the colonial project of cultural erasure and elimination. In the shift of our gaze to the future, we see these trails as the arteries of living landscapes, ready to circulate people, ideas, and relationships into the indefinite future.

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ENDNOTES

¹ Tsayu is one of five Wet'suwet'en clans to which Kweese (Djakanyex, Beaver House) is part. The others are C'ilhts'ëkyu, Likhts'amisyu, Likhsilyu, and Gidimt'en.

² <https://open.library.ubc.ca/collections/delgamuukw>.

³ In a letter to the Archaeology Branch, Ridsdale and Armstrong pointed out that ethnographic and legal data (from Delgamuukw affidavits) outlining the Kweese War Trail were ignored by CGL consulting archaeologists. The response from the Director of the Archaeology Branch was, "traditional knowledge

studies are outside the scope of the [Heritage Conservation Act] . . . archaeologists access technical and academic sources, and early journals, if the latter is available." Regardless of whether or not First Nations provide evidence, the Branch suggests archaeologists can ignore it.

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