Literature and Archival Review:

Traditional Resource Management by Indigenous Peoples and Settler Land Management of the Kluane Region

ANNOTATED BIBLIOGRAPHY & CHRONOLOGY

prepared for
Parks Canada Agency, Kluane National Park and Reserve

by Helene Dobrowolsky, Midnight Arts

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cover photo: Fireweed in burned forest, Alaska Highway near Burwash Landing, Yukon Territory.
Ronald S Phillips / Alamy Stock Photo

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prepared by Helene Dobrowolsky, 25 May 2021

Acknowledgments

In these socially-distanced times, it has been invaluable being able to consult the many databases and online resources hosted by libraries and archives all over the continent. Not every report or book has been digitized, however, and I am indebted to the helpful and efficient staff at the Yukon Energy, Mines and Resources Library, Yukon Archives, and Whitehorse Public Library.

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Fireweed in burned forest, Alaska Highway near Burwash Landing, Yukon Territory. *Ronald S Phillips / Alamy Stock Photo*

Abbreviations

AAND	Aboriginal Affairs and Northern Development
CAFN	Champagne and Aishihik First Nations
CYI	Council for Yukon Indians (now CYFN – Council for Yukon First Nations)
DIAND	Dept. of Indian Affairs and Northern Development
EMR	Energy, Mines and Resources
FN	First Nation
GSC	Geological Survey of Canada
KFN	Kluane First Nation
KNPR	Kluane National Park and Reserve
LAC	Library and Archives Canada
n.d.	No date available
NWMP	North-West Mounted Police
PCA	Parks Canada Agency
TEK	Traditional Ecological Knowledge
TEKW	Traditional Ecological Knowledge and Wisdom
WPL	Whitehorse Public Library
WRFN	White River First Nation
YA	Yukon Archives
YC	Yukon College (now Yukon University)
YG	Yukon Government
YRG	Yukon Record Group

Introduction

> "The land gives us so many gifts; fire is a way we can give back. In modern times, the public thinks fire is only destructive, but they've forgotten, or simply never knew, how people used fire as a creative force. The fire stick was like a paintbrush on the landscape. Touch it here in a small dab and you've made a green meadow for elk; a light scatter there burns off the brush so the oaks make more acorns. Stipple it under the canopy and it thins the stand to prevent catastrophic fire. Draw the firebrush along the creek and the next spring it's a thick stand of yellow willows. A wash over a grassy meadow turns it blue with camas. To make blueberries, let the paint dry for a few years and repeat. Our people were given the responsibility to use fire to make things beautiful and productive—it was our art and our science." — Robin Wall Kimmerer, 2013 [1]

> "The government experts claim that no animals, no birds should be hunted or trapped, that no cutting of timber should take place, that no fires should be allowed to burn in the parks and that people should be kept out except to look as this will disturb the delicate balance of nature.

> "The Indian people have lived in harmony with nature as one of the predators in nature for centuries. They are a part of the delicate balance, just as fires are a part of the delicate balance of nature and are required to clear out mature forest areas unless they are logged out so that new growth can take place providing foods for animals and birds."
>
> — Chief Elijah Smith, Council for Yukon Indians, 1973 [2]

Fire—destructive and transforming—is a vital force, necessary for the continuing renewal of the boreal forest. After fire has swept through mature forests, what remains is a seemingly desolate wasteland of ashy ground, deadfall, and standing deadwood. This merely clears the stage, allowing for new growth and regeneration. Soon the aptly-named fireweed carpets the ground, the brilliant pink blossoms vivid against the blackened trunks. Insects and birds return, winds blow in seeds and pollen. Mushroom hunters travel to burn areas seeking the morels that are known to pop up the year after major fires. An understory of grasses and flowers emerge along with willows, dwarf birch and other shrubs. Moose and elk move through the newly-opened landscape, browsing on the leafy new plants and trees. Poplar trees and aspen arise and, after many years, the mature forest re-emerges, characterized by stands of white spruce.

For early Indigenous Peoples who relied on the forest's resources, fire was an essential tool for heat, comfort, nourishment, communication, hunting, ceremony, and landscape renewal. This report describes some of these uses as documented in a recent review of archival records as well as touching on the arrival of newcomers and their impacts on the landscape. The creation of Kluane National Park and Reserve also influenced land use and attitudes to fire.

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[1] Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants* (Minneapolis, Minnesota: Milkweed Editions, 2013), p. 363.

[2] Brief presented on behalf of the Council for Yukon Indians, in Canada, Parliament, House of Commons, Special Committee on Indian Affairs and Northern Development, 29th Parl, 1st Sess, No. 28 (Chair: J. Judd Buchanan), Appendix TT, p. 28:63.

During this same period, Kluane First Nation and Champagne and Aishihik First Nations have been conducting their own research, with a focus on that most valuable resource, the memories and stories of Elders. While there will likely be overlaps, together these projects should give a more complete picture of Indigenous burning and impacts on the landscape. I prepared a brief summary of some of the findings of this work. More detail can be found in the chronology section of this report. That being said, I've discovered that this is an immense area of study and there is much more to learned.

Methodology

The purpose of this project is: "to increase the understanding of how human use of fire and other cultural practices to manage resources on the landscape may have shaped the modern-day landscape and vegetation mosaic of Kluane National Park and Reserve."

Concurrently, Parks Canada, Champagne and Aishihik First Nations, and Kluane First Nation are conducting a review of Indigenous use of fire in the Kluane region within the context of an existing project, *Da´keyi ukaanathį` je`: All of you watch over our country with your heart: Restoring forest ecosystems in Kluane National Park and Reserve*. This parallel approach involves working directly with Champagne and Aishihik First Nations and Kluane First Nation to engage Elders and Knowledge Holders on the subject matter, as well as supporting a First Nation led review of First Nation owned archives.

While the most important and relevant information will be coming from these primary sources, the people whose ancestors have always lived in the Kluane area; this project is meant to provide additional context through "a review, documentation, and analysis of published sources, reports, and records available in publicly-accessible archives."

This work is intended to help address the following research questions:

- How might Indigenous ecological knowledge and practices inform modern day forest conservation and restoration efforts?
- How did European contact, settlement and colonization impact Indigenous knowledge systems and cultural practices—in ways that could have transformed vegetation—in the Kluane region?
- How did settlers to the Kluane region alter the vegetation mosaic through their own land management practices?

During the start-up meeting and a later email exchange, it was agreed that the most useful products for this work would be a report containing an annotated bibliography and chronological notes as well as compiling copies of relevant photos and excerpts from various types of literature. It was also agreed that the priorities for this work were as follows:

- research of Indigenous use of fire/wildfire, fuel wood in the Kluane Region;
- expand to include other Yukon First Nations, Athapaskan peoples uses of fire;
- to a lesser degree, fire use by Indigenous Peoples elsewhere in North America;
- track fire history of Kluane region, focussing on earlier human-caused fires, inside or in very close proximity to the park; and
- seek clear photos of identified locations showing vegetation in Kluane area in earlier years.

I began with a compilation of resources that were readily available from my home office. These included items in my personal library, a search of online databases from various libraries and archives, and the review of numerous useful documents forwarded by my project manager, Christopher Hunter. Christopher also did considerable legwork for this project by conducting a thorough review of materials

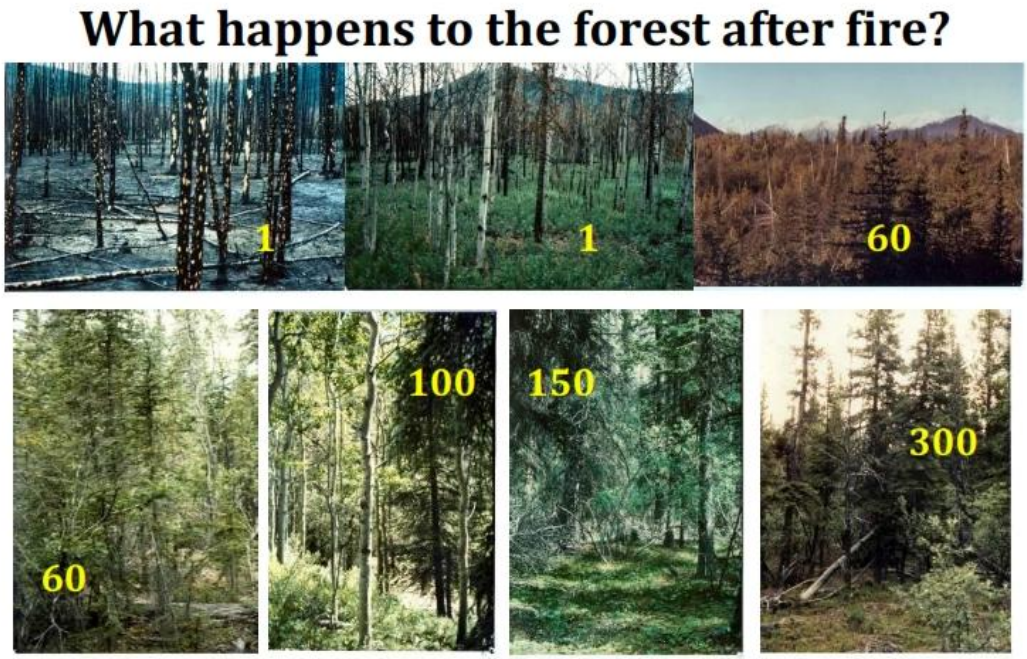
in the KNPR office in Haines Junction. I subscribe to Newspapers.com thereby gaining access to 100 years of *Whitehorse Star* issues. Although, in the early years, there was scant coverage of Indigenous People and issues, as well as the Kluane area; I did find some items of interest not mentioned elsewhere.

I contacted colleagues working in heritage positions for Tr'ondëk Hwëch'in and Vuntut Gwitchin who provided some helpful and interesting information.

When searching online catalogues for Energy Mines and Resources Library, Whitehorse Public Library and Yukon Archives databases, the most useful search terms were: Kluane, Forestry; Kluane, Fire; Kluane, Ecology; and Dalton Trail. Kluane matched with Indigenous and First Nation were less helpful terms given that Kluane is also the name of a Yukon riding and a First Nation. Also, for a time the former community of Silver City was also known as Kluane.

While reviewing archival documents, I noted key messages, took more detailed notes from particularly useful sources, and began a chronology of key events. For many of the types of archival materials listed in this draft report, I have only noted a sampling of these documents to provide examples of the types of resources available.

It must be noted that the limited time allotted for this project means that to a large extent, this should be considered a representative sample. This is a large area of study with a vast amount of literature. There are undoubtedly many additional useful resources. Finally, a disclaimer to inform readers that I am not a scientist or anthropologist, but a historian who enjoys taking occasional excursions into areas of environmental history.



Compilation of photos showing different stages of the boreal forest after fire. *Canadian Forest Service* [3]

[3] Canadian Forest Service image from KNPR slide show entitled, "Fire History and Ecology Study Kluane National Park, 1981".

Cultural uses of fire

In the following notes, I summarize some of my findings during this research. These are selected examples and it should be pointed out that there is much more information in the literature. Most come from observations of newcomers to the area as well as anthropologists, archaeologists and other scientists who worked with Indigenous Peoples in the course of their work. Inevitably, many of these observations are coloured by preconceptions and incomplete understanding.

Fire in Indigenous Cosmology

Many Indigenous story cycles explain how the world and all its elements came to be. Below are two stories of how people got fire. A Tlingit account tells how the trickster Raven convinced Sparrow Hawk to collect fire from far out to sea:

> *At that time Hawk had a long straight bill. But while he was carrying the ember in it, the end was almost burned off, which accounts for its present recurved shape and changed color [black tip and yellow base]. When he reached the land, he dropped the spark, which fell on wood and rock, to each of which its power was given [of kindling fire]. Since that time, man has been able to produce fire through the rubbing together of wood and the striking together of rocks.*[4]

Southern Tutchone Elder Kitty Smith told a more detailed version of this story involving Crow and Chicken Hawk. Crow wanted to cook his King Salmon. When he saw fire out on the salt water, he tried to enlist help from the birds.

> *Chicken hawk he got long nose. "I'll try," he say.*
> *Crow get pitch from wood, tie up his beak for him. "Try now."*
> *He wait for that fire … He poke it with his beak. He start to burn now that beak. Chicken hawk beat it home. "My nose start to burn," he scream.*
> *"You're doing good," call Crow.*
> *Just on shore he fall down. But he got it already that Crow.*
> *That Chicken hawk pretty sick though.*
> *"Come on," Crow tell him. "I'm going to medicine you." His fix him up little beak. "Just nice looking boy, you now," he say. "Women going to like you now."*
> *They cook now that fish. Put away tail so it won't make foolish people. Everybody eat that fish now.*
> *They build fire and from there Crow take rock, flint. He throw it all around. That's why you sometime find that rock all around.* [5]

As for the thunder and lightning that often cause forest fires, Indigenous people in the Aishihik area ascribed these forces to Thunderbird. Tagish people tell of an ancestor who kicked a Thunderbird feather on the path north of Telegraph Creek. Only a few people survived the resulting explosion and they then moved north to Big Salmon country. The Tagish also referred to rainbows as "thunderbird's snare." [6]

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[4] George Emmons, *The Tlingit Indians* (Vcr./To., Douglas & MacIntyre; NYC, Museum of Natural History), p. 158.
[5] Kitty Smith in Mrs. Angela Sidney, Mrs. Kitty Smith and Mrs. Rachel Dawson, *My Stories are My Wealth* (Whitehorse, © Council for Yukon Indians), pp. 15-16.
[6] Catharine McClellan, *My Old People Say* (Canadian Museum of Civilization, 2001; reprint of 1975 ed.), p. 175.

Fire Making

The two methods used to start fires were the fire drill and what has been described as "strike-a-lights", creating sparks by striking rock with flint. Southern Tutchone Elder Josie Sias described these in 1973:

> *The technique of fire building was not a simple method. Implements of fire making of these 'Long Ago People', consisted of a drill and bow and the igniting material, scrapings from dried fungus, dried grass and twigs. This powder is said to be highly flammable, when sprinkled to the hot tip of a fire drill. Needless to say, it was sparingly used. A later method of fire making was that of 'rock matches' commonly known as flint.*[7]

In 1980, Gwich'in Elder Myra Kaye spoke of using flint to ignite fires:

> *At that time we used flint to start fires. This is what we did. Ah, fire [sparks] all over. We made shavings, a big pile. We held it while working the flint. Eventually the shavings lit from the spark. Then we put dry branches in with the shavings, which caught fire. We made more shavings and added them to the fire. Once there was flame, we made fire. All our lives we did this. Whoever was going to make fire did this with the flint. When we travelled, that is what we did.*[8]

People carried fire-making implements such a bow and drill, flints and various types of kindling. An Inland Tlingit man told anthropologist Catharine McClellan that the drill was made of cottonwood and the hearth was any type of hardwood. He also mentioned using a particular type of flint which was stored in a skin bag with rolls of birch bark and an igniting powder made from a fungus. Live coals, wrapped in thick bark, made it possible to start a fire quickly at a journey's end. [9]

Anthropologist George Emmons described a fire bag of a Tlingit shaman containing pyrites and dried tree fungus. Another small bag belonging to an elderly Chilkat man contained small splinters of pitch wood for fire kindling when travelling inland.[10] In the Kluane area, a few sites were identified as good places to obtain flint for striking fire.[11] When archaeologists—led by Moose Johnson, a Southern Tutchone man—excavated an older brush camp site up Henry Creek in 1948, they found about a dozen or so rolls of birchbark that had likely been cached for kindling.[12]

Klondike stampeder George M. Mitchell headed for the goldfields via a northern route, down the Mackenzie River then following the Hudson's Bay Co. trade route. After a knee injury, he spent much of the winter living with a group of Gwich'in in order to heal. He learned a little of their language and recorded several interesting observations about their lives. He was especially impressed by their proficiency with fire and described their fire-making skills in some detail:

> *If an Indian wants to make a cup of tea or roast something, he will make a very small fire that throws a tremendous heat with next to no smoke. He chops his sticks, we'll say, ten or twelve inches*

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[7] Josie Sias, "A Recording of Indian History—Area: Kluane Lake to White River, Yukon Territory." 19-page typescript, 1973.
[8] Myra Kaye quoted in VGFN and Shirleen Smith, *People of the Lakes* (Edmonton, University of Alberta Press, 2009), p. 79.
[9] McClellan, 2001, pp. 293-294.
[10] Emmons, 1991, p. 159.
[11] W. Workman, *Prehistory of the Aishihik-Kluane area, southwest Yukon territory* (Ottawa: National Museums of Canada, 1974), p. 27.
[12] Elmer Harp Jr., *North to the Yukon Territory via The Alcan Highway in 1948: Field Notes of the Andover-Harvard Expedition* (Yukon, Tourism and Culture, Occasional Papers in Archaeology No. 14, 2005), p. 28.

long, and splits them small: then he piles them lengthwise on top of one another—parallel you understand, not criss-cross—and then he lights them from the top ...

They make big fires with larger logs, for parties of eight or ten men, in just the same way, laying the logs lengthwise. They're most expert at finding dry twigs, and they know how to split dry wood out of the inside of dead branches even if they're soaking wet on the outside … They never leave a fire burning by any chance—you won't find any burned land up in that valley anywhere. [13]

Fire was critical for cooking, food preservation, smoking hides, and making tools—using fire to heat and shape items such as horn spoons and birch vessels. Fire was key in creating art, McClellan described pigment that was collected then burnt to create red paint (cited in Workman, 1978:28).[14] It was even used in a controlled manner for harvesting. Although bark was most easily collected in spring when the sap was running, Southern Tutchone Elder Mary Jacquot described harvesting "winter bark" for canoe building by setting a brush fire around the base of a tree, then—once the trunk had warmed up—quickly stripping off the bark.[15]

In 1890 and again in 1891, journalist Edward Glave travelled into Southern Tutchone traditional territory over the Chilkat trail. He made a number of observations illustrating the importance of the boreal forest to his Tutchone hosts. He noted that the forest gave evidence of a larger former population, undoubtedly much reduced due to epidemics that were moving in from the Alaskan coast:

There must have been many more people in former days. There are signs of a great deal of work being done in the woods in former days. Whole forests of timber have been felled for fuel, it being cut several feet from the ground, showing that it was cut in the winter when the snow was deep.[16]

When Glave questioned why people did not stay year-round in their settlement at Neskataheen, they explained as follows:

The natives say they cannot live in the village when the stormy weather arrives. Instead of gathering in a winter stock of fuel and building strong weather-proof houses, they prefer to trek away into the forests and avail themselves of the shelter of the dense timber lands. All make a beeline for the woods upon the approach of the storm and the valley becomes totally deserted. They say it is quite warm in the forests and there they have an unlimited supply of wood. [17]

Heat, Cooking and Preserving

One of the main indicators of a camp is a cooking hearth, made up of fire-cracked rock and charcoal, often found with bone fragments, fish scales and other remnants from long ago meals. Ancient hearths are among the oldest and most prevalent reminders that people occupied this land for thousands of years. This is evidenced at the Little John Site, located within the White River First Nation traditional territory, twelve km north of Beaver Creek and two km east of the Alaska-Yukon border, is one of the earliest

[13] Angus Graham, *The Golden Grindstone: the adventures of George M. Mitchell* (Philadelphia: J.B. Lippincott, 1935), p. 217.
[14] Wm. B. Workman, *Prehistory of the Aishihik-Kluane area, southwest Yukon territory* (Ottawa: National Museums of Canada, 1978), p. 28.
[15] Harp, 2005, p. 102.
[16] Eds. Julie Cruikshank, Doug Hitch and John Ritter, *Travels to the Alseck: Edward Glave's reports from southwest Yukon and southeast Alaska*, 1890-91 (Whse., Yukon Native Language Centre, 2013), p. 282.
[17] Ibid., p. 283.

known sites of human occupation in North America. This multicomponent archaeological site has yielded evidence of occupation from recent times back to the late Pleistocene, some 14,000 years ago.

Fires were set up in the middle of shelters consisting of a framework of poles, covered with skins, with an opening allowing smoke to escape. Lean-to shelters of various sizes were either set up as fire reflectors with the fire on one side or large double structures with a long fireplace in the middle. [18]

Indigenous Peoples were proficient in making various sizes of fires and using different cooking methods. People heated rocks that were then placed in containers of liquid to boil food and create a nutritious soup. Smaller smoky fires were made to dry fish or meat and to smoke hides. Meat and fish were roasted using sticks to prop up the meat. In 1948, Elmer Harp described two feasts prepared by the Southern Tutchone members of their expedition using slightly different roasting methods and fire types:

> *Later in the aft. sat out under a big spruce with Moose, George, Fred & Dickie roasting moose ribs before a 6' long open fire on the bank of the creek, the meat spitted on a sharpened stick. Took 2 hrs. to roast this chunk big enuf for all, & it was elegant! They give it a quick sear on both sides, then back it off for slow roasting. Moose then stripped down the outer bark of a spruce & we all ate some of the paper thin strips of the inner bark–mild & piquant; something like palm tree hearts. The Indians eat this inner bark (cambium layer) every July when it is sweet & tender & before it turns into wood.*

Roasting a sheep quarter, 1948. (Harp 2005: 25)

> *. . . . Then a delightful experience, stopping & having a meal Indian fashion: as we came down to the creek Jimmie & Sam just looked for a good place to halt where everything was handy; we dismounted on a gravel flood beach & Jimmie immediately lighted a fire under the stump end of a large dead spruce that had been cast up by the waters; then he went over to the edge of the cutbank where a few poplars grew on the outside of the spruce woods & cut 2 long poplar staves. Sam had the tea pot heating in the fire when Jimmie came back & stuck a side of moose ribs up before the blaze & a string of steak on another stave; then they cut a pile of poplar branches & spread them over the gravel as a sort of table cloth. When the meat was roasted we sat around, each with a piece of steak & a rib, cutting off chunks with a hunting knife; also tea, good strong bush tea, & some cinnamon rolls obtained from Paul. That's the way to eat meat, all right!* [19]

[18] McClellan, 2001, pp. 240-241.
[19] Elmer Harp Jr., 2005, pp. 39-41.

Sweat Baths

Sweat baths were taken for medicinal or purification purposes. Small shelters were made from dome-shaped willow frames covered with hides. Red-hot rocks were placed in a hole in the ground inside the shelter then splashed with water to make steam.[20]

Cremation

There are a few mentions of cremation in the early literature. McArthur wrote of the cremation of a woman from Neskataheen as related by Dalton Post trader Casey Armstrong. In his 1898 report, Inspector Jarvis of the NWMP mentioned a "cremation village" about one mile west of the police post, then went on to describe the funeral ceremonies of "one of the oldest chiefs". [21]

The late Elder Bessie John of the White River First Nation identified a particular hill, Nįį'įį—meaning "(game) look-out" in the Upper Tanana language—which Indigenous People used as a crematorium. Charcoal from these fires can still be found in the vicinity and has been carbon dated at 10,000 years.[22]

Signal Fires

Many early visitors commented on the use of signal fires by Indigenous Peoples all over the Yukon. In 1883, while Frederick Schwatka was travelling on the Yukon's headwater lakes, his guides built a smoky fire from some dead and fallen spruce trees "sending up great billows of dense resinous smoke that must have been visible for miles." Before camping that evening, they espied responding smoke—15 or 20 miles distant—from a fire that had been set by Tagish people who were anticipating Tlingit traders. [23]

Klondike stampeder George Mitchell recalled the ability of his Gwich'in hosts to signal, by making smoky fires then using a coat or blanket to direct the smoke.[24] Cornelius Osgood also wrote of Gwich'in use of signal fires:

> *When a party splits on a hunting trip, a successful member may make a smoke signal. To do this he chooses a hill with a brushy green spruce tree on it, which he burns without cutting it down. Also a person looking for someone may do the same thing to indicate his presence*. [25]

Some notable examples from the Kluane area were recorded by a journalist, a surveyor and a big game hunter. Edward Glave and Jack Dalton entered Southern Tutchone country via the Chilkat Pass first in 1890, then again in 1891. Glave took a great interest in the people and places they encountered along the way. He wrote detailed observations and even sketched a few portraits. He made several mentions of signal fires, most vividly when his guide Nanchay used them to locate his family after a long absence:

> *He said his wife had moved camp from where he had left her, and really he did not know where she was. He began an incessant signaling by burning trees, and by and by the keen eyes of Tsook spied*

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[20] McClellan, 2001, p. 246.
[21] *1898 NWMP Annual Report*, Inspector Jarvis Report, pp. 104-105.
[22] Helene Dobrowolsky, *White River First Nation Land Use and Occupancy Study* (prepared for WRFN, 1997), Appendix 1.
[23] Frederick Schwatka, *A Summer in Alaska* (St. Louis, Mo.: J. W. Henry, 1894), p. 114.
[24] Graham, 1935, p. 217-218.
[25] Cornelius Osgood, *Contributions to the ethnography of the Kutchin* (Yale University Publications in Anthropology, Number 14. Human Relations Area Files Press, New Haven, Connecticut), p. 103.

a faint curl of smoke creeping up from the wooded brow of a hill about ten miles away, which told of the whereabouts of the missing family.[26]

When J.J. MacArthur was working on the International Boundary Survey in 1900, he wrote of a member of their party signalling to their base camp by firing "an isolated scrubby spruce." Not only was there an answering fire from people at camp, but they were surprised to also see two other distant fires to the southeast, "the first indication of Indians in the vicinity."[27]

Signal Fire from Little Arm to Burwash, 1948. *(Harp, 2005: 53)*

In 1912, trophy hunter Thomas Martindale witnessed one use of signal fires in the Kluane area:

Early this morning we saw a great volume of dense smoke on the very top of a mountain covered with timber, and near the foot of the same elevation another "big smoke" was in sight. The two fires were said to be signals to [the women] that they had killed a moose; or, to be exact, the top fire was to signal them to come—both they and the children—as a moose had been killed; the lower one was built close to the dead animal, so as to lead them directly to the carcass. [28]

As late as 1948, signal fires were still a convenient means of communication. Elmer Harp travelling with a party of scientists and Southern Tutchone men from the Burwash Landing area, described the use of a signal fire to notify the settlement that the group was on their way:

… we rounded a point in the Little Arm [Kluane Lake] & could see Burwash perhaps 10 miles away. The Indians decided to put up a smoke signal to let them know we were coming, so they built 3 fires 100 ft. apart. While Jimmie was dragging in logs for the center fire, Moose got a great stump going on one end, & Sam calmly piled in some brush at the base of a 50 ft. spruce & before we knew it the whole tree was a thunderous blaze. I'll never forget that signal! ... When we left, Sam's spruce was still burning around the base & nobody seemed to mind the clump of 3 other big ones that stood right next to it. [29]

Harp also described the summer hunting camp of Chief Albert Isaac near the base of Big Arm on the north shore of Kluane Lake. He mentioned that the camp was situated so that signal fires could be seen in Burwash Landing when they wished the boat to deliver supplies. [30]

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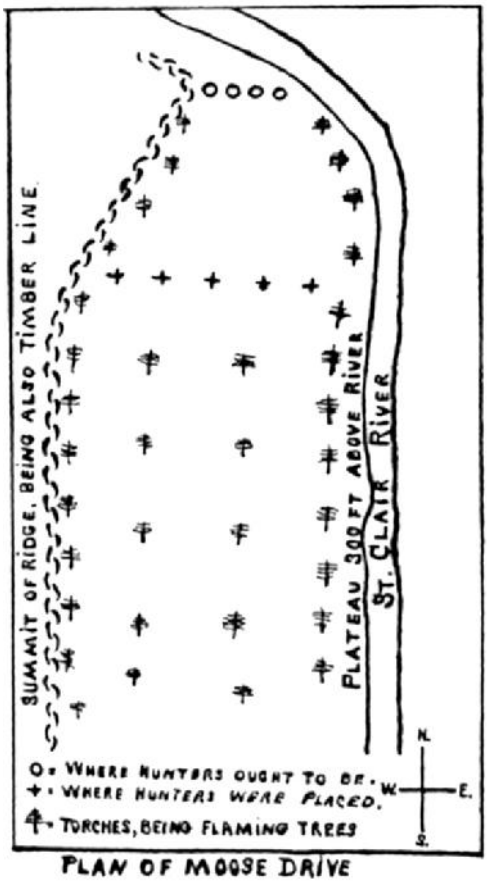
[26] E. J. Glave, *Travels to the Alseck: Edward Glave's reports from southwest Yukon and southeast Alaska, 1890-91* (eds. Julie Cruikshank, Doug Hitch and John Ritter; Whse., Yukon Native Language Centre, 2013), p. 253.
[27] J.J. McArthur ("Notes on an Exploration through the Yukon along the base of the St. Elias Alps," reprinted from *The Journal of the Royal Astronomical Society*, Oct. 1917), 325.
[28] Thomas Martindale, *Hunting in the Upper Yukon* (Philadelphia: George W. Jacobs & Company, 1913), pp. 62-63.
[29] Elmer Harp Jr., 2005, pp. 54-55.
[30] Ibid., p. 85.

Hunting

In 1914, Harry Auer made a big game hunting expedition to the Kluane area, relying on local guides to facilitate the trip. He described a drive to hunt moose, set up by his guides, by driving them through two rows of flaming trees. The drive, which was ultimately unsuccessful, was described in detail and included a diagram of the set up.



PLAN OF MOOSE DRIVE

Previously he described a caribou fence encountered by their party. A large party including women and children drove the animals between the narrowing fences "with much noise and even igniting trees."[31]

Two years earlier, visiting hunter Thomas Martindale described a similar moose drive used by his guides:

> *There were many fir trees standing by themselves whose lower branches were dead, and these when touched with a match would burn and quickly snap almost like fire crackers. The flames would then rapidly shoot to the tops of the trees, making a brilliant fire accompanied by a dense smoke. There was no danger of a forest fire, as the trees that were fired were always old trees and for the most part dead at the bottom, and they nearly always stood alone. The crackling of the lower branches could be heard from afar, and the scent of the burning wood would soon be caught by the sensitive nostrils of any moose that might be in the vicinity*. [32]

Smudge Fires

In the days before protective nets and insect repellents, people sometimes put a protective coating of spruce pitch on their faces and, if possible, set up camp in open windy spots. They also used smudge fires to discourage the swarms of voracious mosquitoes and blackflies. McClellan wrote of people lighting as many as five or six fires made with green wood around their camps. In 1890, E.J. Glave described how Indigenous People fired dry grass to keep away insects.[33] According to Mary Jane Moses, Gwich'in people also made smudge fires with green grass or birch chaga.[34]

Landscape Burning

> "I have heard that forest fires are a way of nature taking care of itself, replenishing the forest floors with new growth, new food for animals. Mushroom growth. Forest fired areas are good trapping areas a few years after the burn, fur bearing animals, marten, mink, etc."
>
> — Mary Jane Moses, 2021[35]

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[31] Harry Auer, *Campfires in the Yukon*, (Whitefish, Montana: Kessinger Publishing, 2005 [Originally published Cincinnati: Stewart & Kidd, 1917], pp. 132-136, 36.
[32] Martindale, 1913, p. 116.
[33] E.J. Glave, *Travels in the Alseck*, p. 98.
[34] McClellan, 2001, p. 180; Cruikshank et al, p. 98; Mary Jane Moses, email communication, 21 February 2021.
[35] Mary Jane Moses, Ibid.

> "The incidence of fire in the Dezadeash and Shakwak Valleys … must be emphasized. In all our studies of soils and vegetation in the valleys proper we found evidence of fire. This was in the form of charcoal, or partially burned wood buried in the soil, or fire scars on living trees. Bits of charcoal were found in every profile of wind-deposited silts that we examined and in every organic horizon separating the lake bed silts in the lower Dezadeash basin. There can be no doubt that fire has been a major factor in the life of the valley from the beginning of occupance." [36]

Indigenous Peoples have always been adaptable, moving and adjusting to changes in climate, food availability, and—not least—landscape changes due to immense wildfires, destroying vegetation and displacing animals and humans. This burnt-over landscape was essential to a healthy northern environment allowing for a replenishment of plant and animal communities. As well as fires caused by lightning strikes, there are numerous examples of intentional or anthropogenic burning, people setting fires for specific purposes. What follows are a few examples.

McClellan noted that during the hungry spring season, people set fires to thaw ground in order to harvest previously marked patches of *Hedysarum alpinum* or bear root.[37] In 1891, Glave wrote of how "miles and miles of blackened stumps marked the ravages of forest fires" and noted the seeming carelessness of his Indigenous companions in leaving signal and campfires untended. Michael Gates recalled travelling by pack horse through dense undergrowth in the Tatshenshini valley in 1972 and being told by his guide that in earlier decades, the same area would have been fired to open the landscape and create more browse for moose.[38] Photographs of this area taken during the Klondike Gold Rush period show a more open landscape with evidence of fire-killed forests.

Up until the 1950s, the Gwich'in of the Yukon Flats region of Interior Alaska regularly set fires along creeks and wetlands thereby creating fresh forage for waterfowl, muskrats and moose. When the Alaskan state government discouraged this practice, it became increasingly difficult for the Gwich'in to draw upon this traditional means of subsistence.[39] Another writer observed that since there was a higher lightning-strike density within the traditional territory of the Gwich'in of the eastern Interior of Alaska, they "showed greater mobility in hunting moose and caribou, … which enabled them to avoid and or target a range of habitats affected by wildfires." [40]

In northwest British Columbia, the Gitksan and Wet'suwet'en peoples burned black huckleberry and lowbush blueberry patches "to stimulate growth of new stems and production of berries, while preventing invasion by other shrub species and conifers."[41] The B.C. Forest Service discouraged this practice in the late 1930s. On the Gulf Islands of British Columbia, the Coast Salish people used fire to maintain open savannah habitat despite living in cool wet climate conditions that favour coniferous forests. This has

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[36] Frederick Johnson and Hugh M. Raup, *Investigations in Southwest Yukon: geo-botanical and archaeological reconnaissance* (Andover, Mass.: Phillips Academy, 1964), p. 88.
[37] McClellan, 2001, p. 202.
[38] Michael Gates, *Dalton's Gold Rush Trail* (Harbour Publishing, 2012), pp. 85-86.
[39] Sharon Levy, "Rekindling Native Fires" (*Bioscience*, April 2005, Vol. 55 No. 4), p. 307.
[40] David C. Natcher et al, "Factors Contributing to the Cultural and Spatial Variability of Landscape Burning by Native Peoples of Interior Alaska," *Ecology and Society* 12(1): 7. 2019.
[41] Leslie M. Johnson Gottesfeld, in "Aboriginal Burning for Vegetation Management in Northwest British Columbia," in *Human Ecology*, Vol. 22, No. 2, 1994.

been documented by historical and ethnographic research.[42] In the BC Interior, the Secwepemc people used fire to increase berry crops and improve root digging areas.[43]

Farther afield, intentional burning was practiced by a diversity of groups including prairie peoples, Native Americans in California, and Aboriginal people in Australia. Indigenous Peoples kept prairie lands open by burning woody vegetation. It has been suggested that these fire management practices fell into disuse as populations declined due to disease and colonization. [44]

In California, fire was used in oak forests to promote acorn harvests and control weevils, to encourage growth of hazel shoots for basket weaving, and to burn prairie to preserve meadows. In 1929, a Karuk woman stated, "Our kind of people never used to plow. All that they used to do was to burn the brush, so that some good things will grow up. They do not set the fire for nothing, it is for something they set the fire."[45]

Newcomers and Landscape impacts

The first Euro-Americans arrived in this area in the late 19th century with the occasional prospector or explorer travelling inland via the Chilkat Trail. A few others reached the area from the Yukon River corridor. Arthur Harper, a prospector and trader, travelled up the White River in 1873 during an unsuccessful search for copper. In 1891, explorer Frederick Schwatka and geologist C.W. Hayes travelled overland from Fort Selkirk.

These few newcomers became a flood in 1897-98 after Jack Dalton made some modifications to the Chilkat trail, making it possible to drive cattle along the trail, and this became one of the routes to the Klondike goldfields. North-West Mounted Police posts were set up along the route to collect customs and monitor the stampeders. In his annual report from Dalton Trail post, Inspector Jarvis stated, "I am told that during the last couple of years, the fur has been driven off by the many bush fires that have been started by careless campers."[46]

The next wave of arrivals was triggered when two Tagish men, Skookum Jim (Keish) and Dawson Charlie (Káa Goox)—both of whom were involved in the original Klondike discovery—found gold on Fourth of July Creek in 1903. By year end, 2000 claims had been recorded and in 1904, the RNWMP estimated there were 8-10,000 people in the area. The main route to the new diggings was west from Whitehorse on a hastily built wagon road following an Indigenous travel route. The placer miners made great demands on forest resources for building mining structures, clearing vegetation from creek banks by burning, and building a succession of fires to thaw frozen ground in order to reach bedrock.

This mining period was relatively short-lived. The next influx of would-be miners came with the discovery of gold in the spring of 1913 on the Chisana River in Upper Tanana traditional territory, just over the international border with Alaska. During the ensuing Chisana Gold Rush, many Canadian gold seekers set off from Dawson City and followed Indigenous trails inland from Coffee Creek and the mouth

[42] Jenny L. McCune et al, "Multidisciplinary synthesis of long-term human–ecosystem interactions: A perspective from the Garry oak ecosystem of British Columbia," in *Biological Conservation* (vol. 166, Oct. 2013), pp. 293-300.
[43] Ken Favrholdt ("Fire History in BC's Interior," in *BC Grasslands*, October 2004), p. 4.
[44] Christina Eisenberg et al, Out of the Ashes: Ecological Resilience to Extreme Wildfire, Prescribed Burns, and Indigenous Burning in Ecosystems," *Frontiers in Ecology and Evolution*, Nov. 26, 2019.
[45] Sharon Levy, 2005, p. 307.
[46] Insp. A.H. Jarvis, *North-West Mounted Police, 1898 Annual Report*, Appendix H, p. 105.

of the White River. Once again, newcomers, who were largely unskilled in wilderness travel, caused extensive fires due to carelessness with cooking and campfires. In their reports, police and surveyors mentioned the thick pall of smoke from area wildfires.

Alaska Highway construction and impacts

For many years, stories of Alaska Highway construction focussed on the US Army soldiers braving the challenges of the northern wilderness to build a highway in record time. There was little mention of the thousands of civilian workers who followed close behind to turn a crude tote trail into a driveable road, and even less about the impacts on the people who lived here, primarily Indigenous Peoples in remote communities. There has been much work in recent decades to correct the record as well as take a closer look at the environmental effects of the highway.

Burning slash along unfinished road, 1942. *YA, R.A. Cartter fonds #1574*

During the war-time urgency of early 1942, the Canadian and Yukon governments placed few restrictions on activities by the American military. Yukon Commissioner George Jeckell was appalled to learn that a federal official had given permission for US Army engineers to burn their piles of slash, despite lack of fire permits or any fire-fighting equipment.[47] Many of the troops had a casual attitude to fires, being careless with inflammable materials and lit cigarette butts. Federal official LeCapelain later pointed out that the territory had no staff or funds for forest fire protection, and he had to rely on the cooperation of the US Army, the American Public Roads Administration, and the Canadian Dept. of Transport.[48]

In July 1942, the Yukon Council approved an amendment to the Game Ordinance allowing US Army personnel to purchase resident hunting licences for a dollar each in order to provide some sport and augment the military diet. Consequences of this hasty decision included numerous complaints of overhunting and driving game far from the highway corridor, making it harder for local people to obtain food. There were many accusations of wastage and disrespect of the animals as evidenced by photos of

[47] Robert G. McCandless, *Yukon Wildlife: A Social History* (Edmonton, University of Alta. Press, 1985), p. 77.
[48] LAC, RG 85, Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.

soldiers propping up various animal corpses for supposedly humorous photos. Largely in response to concerns about wildlife loss, in 1943, Yukon Council declared Kluane area a game sanctuary, closed to all hunting, trapping and fishing. This included a 10,130 square mile area southwest of the highway between White River and the Alsek and Dezadeash Rivers. Initially a 10-mile setback along the Alaska Highway near Burwash Landing supported an outfitting business and hunting and trapping activity by what was then called the Burwash Indian Band. In April 1946, the sanctuary boundary was extended to the highway. This ban excluded Indigenous Peoples from large parts of their traditional territories for four decades.[49]

Postwar Period

Highway construction influenced settlement patterns with new service centres being constructed along the road and people moving to be closer to jobs, schools and other facilities. While influencing transportation and settlement, not surprisingly the highway corridor was also the main locale of human-caused fires.[50]

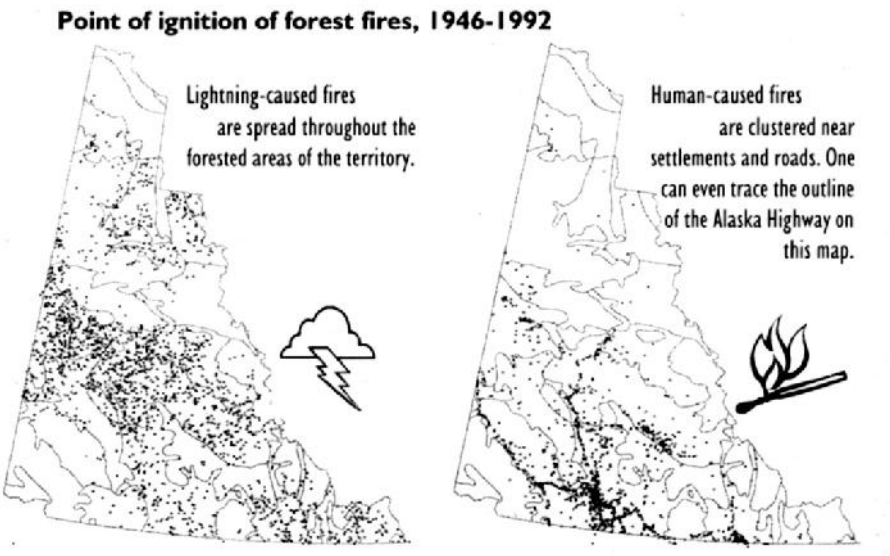

Illustration of links between highways and human-caused fires. *Yukon State of the Environment Report, 1996.*

Fire control became a greater issue, particularly after the major fires of 1958 that swept across much of the southern Yukon. The fire came so close to engulfing Whitehorse, the mayor declared a state of emergency and ordered residents to pack their belongings. Plans were made to evacuate hospital patients by train. The town was ultimately saved by cooler weather and rain.[51]

[49] McCandless, 1985, pp. 72-85; David Neufeld, "Kluane National Park Reserve, 1923-1974: Modernity and Pluralism" in *A Century of Parks Canada, 1911-2011* (University of Calgary Press, 2011), pp. 243, 247.
[50] Yukon and Canada, *Yukon State of the Environment Report,* (© YG, Dept. of Renewable Resources; Canadian Wildlife Services, 1996), p. 94.
[51] Les McLaughlin, "The Fires of '58" A CKRW Yukon Nugget. https://yukonnuggets.com/stories/the-fires-of-58

By the 1950s, forest fire management was the responsibility of the federal Dept. of Indian Affairs and Northern Development (DIAND). Early fire reports mention the role of the fire warden who seemed to rely greatly on assistance from local settlers and Indigenous Peoples.

Kluane National Park and Reserve

In 1943 the Kluane Game Sanctuary was established in the area that would become Kluane National Park and Reserve. The creation of the game sanctuary banned First Nations from carrying out traditional harvesting activities, effectively removed them from the land, and created hardship and alienation for years to come. First Nations traplines were taken away and cabins dismantled or burned.[52] Implementation of these land exclusion policies likely contributed to the intergenerational legacy of residential schools and "a policy to eliminate Aboriginal people as distinct peoples and to assimilate them into the Canadian mainstream against their will." [53]

When W.A. Fuller prepared a "Yukon National Park Survey" in 1958, he compared a number of Yukon areas as potential sites for establishing a National Park. He determined that Kluane was the best possible choice, primarily due to its scenic and wildlife values. One of his considerations was forest fire protection, pointing out that the St. Elias Range was "unlikely to be threatened from the direction of the great ice-and-snow-fields," while he had dropped the Takhini Hot Springs area as a possibility due to the recent wildfire depredations.[54]

In 1972, then minister of Indian Affairs and Northern Development, Jean Chrétien proclaimed Kluane National Park as one of the first three national parks to be established north of the 60th parallel. In December 1973, the Council for Yukon Indians presented a brief strongly objecting to the establishment of the Park in advance of a land claim settlement.

In response, in 1974 the following amendment was included in *An Act to Amend the National Parks Act*:

> "the Governor in Council may…set aside a reserve for a National Park of Canada, pending a settlement in respect of any right, title or interest of the people of native origin therein…and save for the exercise therein by the people of native origin of the Yukon Territory or Northwest Territories of traditional hunting, fishing and trapping activities, the National Parks Act applies to the reserve so set aside…" [55]

Kluane National Park Reserve was established in 1976, protecting 21,980 square kilometres with the proviso that the formal Park status would await the settlement of any outstanding Native claims. With establishment of the Park, came the lifting of bans on hunting and trapping for First Nations. Nonetheless, many First Nations citizens continued to avoid the area for fear of reprisals. [56] That fear was based on real lived experiences in many cases:

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[52] Kluane National Park Management Board, Champagne and Aishihik First Nations, and Kluane Tribal Council, *Kluane National Park and Reserve Management Plan 2010*, p. 8. https://www.pc.gc.ca/en/pn-np/yt/kluane/gestion-management/plan

[53] The Truth and Reconciliation Commission of Canada, *Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada*, 2015, pg. 3. https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Executive_Summary_English_Web.pdf

[54] W.A. Fuller, "Yukon National Park Survey, July – August, 1958" (Typescript. Whitehorse, Canadian Wildlife Service).

[55] from An Act to Amend the *National Parks Act*, 1974, s. 11.1

[56] *Kluane National Park and Reserve Management Plan 2010*, p. 8.

> Several people did not believe youth experienced the same kind of unease using the park largely because they have no memory of not having harvesting rights or experienced the fear-inducing behaviour of park wardens and conservation officers. Stories from several interviewees and focus group participants described what they consider overly authoritative behaviour of park wardens and conservation officers towards Champagne and Aishihik First Nations and Kluane First Nation people. [57]

In 1979, in protest of their long exclusion from a key part of their traditional territory, Indigenous People began sending hunting parties into the game sanctuary area north of the current Park boundary. According to Kluane First Nation Elder Mary Easterson, this was sparked by "the territorial government's refusal to allow children from the Kluane Tribal School to learn traditional methods of hunting and trapping in the sanctuary."[58] Four years later, after a successful challenge on behalf of two men from the Burwash Landing area, the Yukon Court of Appeal ruled that the Yukon government could not restrict native hunting rights, and Indigenous Peoples were entitled to hunt in game sanctuaries.[59] This decision was upheld five months later when the Supreme Court of Canada denied a Yukon government appeal.[60]

Parks Canada wildfire policy evolved over the years as the natural role of fire in Canada's forests became better understood. One of the more significant shifts was occurring at the same time as planning for Kluane National Park Reserve was getting underway. In efforts to develop specific policy for Kluane National Park and Reserve, J.B. Theberge suggested that desirable fire management outcomes for the park should include allowing safe lightning fires to burn, and prescribing additional controlled fire to assure the natural fire regime.[61] In 1979 Parks Canada wildfire policy moved from one of wildfire exclusion to one that recognized wildfire as a natural process and the need to maintain wildfire as a driver of ecosystem development.[62] In 2000 the Panel on the Ecological Integrity of Canada's National Parks recommended that in appropriate parks efforts be made to actively manage to restore fire and that where possible "Parks Canada should work with Aboriginal peoples to understand the history of Aboriginal fire use and its application to prescribed fire." [63]

The 1993 *Champagne and Aishihik First Nations Final Agreement* established the southeastern portion of the park reserve as Kluane National Park. The *Kluane First Nation Final Agreement* was signed in 2003; the northern portion of the park reserve will retain park reserve status until the White River First Nation concludes a final agreement.[64]

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[57] Interviews with Agnes Johnson; Mary Easterson; Lawrence Joe; James Allen; YFN2, Chuck Hume, James Allen interviews, 2017; Lena Johnson, focus group, 2017 cited in Roberta Nakoochee, *Reconnection with Asi Kéyi: Healing Broken Connections' Implications for Ecological Integrity in Canadian National Parks* (MA Thesis, University of Guelph, 2018) p. 68.

[58] David Tait, "Kluane Game Protest – Natives Trying to Save 'A Way Of Life'" in *Whse. Star*, 1979-05-30.

[59] Anne Tempelman-Kluit, "Appeal court says Indians can hunt in game sanctuary," *Whse. Star*, 1983 June 30.

[60] Becky Striegler, "Supreme Court leaves hunting decision alone," *Whse. Star*, 1983 Nov. 25.

[61] J.B. Theberge, *Considerations for fire management in Kluane National Park* (Ottawa: Department of Indian Affairs and Northern Development, 1972).

[62] Brad Hawkes, *Fire History and Management Study of Kluane National Park* (Victoria, BC: Pacific Forest Research Centre, 1983).

[63] Canada, Panel on the Ecological Integrity of Canada's National Parks, *"Unimpaired for Future Generations"? Vol. II: Setting a New Direction for Canada's National Parks*, p. 85. http://publications.gc.ca/collections/collection_2017/pc/R62-323-2000-2-eng.pdf

[64] *Kluane National Park and Reserve Management Plan 2010*, p. 3.

Between 2004 and 2009, Parks Canada worked with Champagne and Aishihik First Nations and Kluane First Nation on the initiative *Healing Broken Connections* to help reintegrate First Nations into the portions of their traditional territories that now lie within Kluane National Park and Reserve. During one activity, Park staff drove Elders to Bullion Plateau in the alpine in an Argo, a 24-km return trip. During this trip, the Park employees took directions from Elders and lit a fire for tea which Elder Pauly Sias considered significant, as they normally discouraged fires near the trail. These exceptions were "very simple things but they were quite impacting". [65] While this initiative had a finite timeframe, the work to ensure Southern Tutchone connections to lands and waters within Kluane National Park and Reserve is ongoing.

Champagne and Aishihik First Nations and Kluane First Nation are now key partners in the conservation and management of cultural and natural resources in KNPR.[66] CAFN, KFN and Canada are equally represented on the Kluane National Park Management Board which advises the Minister responsible for Parks Canada on management, development and planning related to the park. Together CAFN, KFN and Canada recognize the need for a comprehensive fire history study and a need to understand long term First Nation use of fire in the Kluane area in order to more fully understand the role that fire has played in the health of the park's forests.[67]

In 2020 Parks Canada, CAFN and KFN commenced a collaborative project - *Dákeyi ukaanathı̀ jè: All of you watch over our country with your heart – Restoring forest ecosystems in Kluane National Park and Reserve* – with an interest in both informing a long-term approach to restoring and increasing the resilience of Kluane forests, while helping to revitalize Southern Tutchone traditions and culture. The initiative will include not only working to better understand the regions wildfire regime, but working with Elders, knowledge holders and respective First Nations heritage staff to understand Indigenous use of fire and the impacts of settler land management practices though their eyes. Candidate areas for active management—prescribed fire, cultural burning or other interventions—will be planned with an eye to connectivity and an understanding of the shared conservation interests and objectives of CAFN, KFN and adjacent jurisdictions. Shared conservation interests include exploring opportunities to support traditional activities and promote long term connections to the land.[68]

New Accommodations

Henry T. Lewis suggested a few reasons why many early anthropologists and ethnologists did little research into cultural burning as a means for hunter-gathers to modify and maintain their environment. He summarized these as follows:

> (1) "our own cultural traditions, involving a much outdated view of how fire affects environments;
> (2) "evolutionary assumptions which stress the point that foragers do not exert control over the amount and diversity of natural resources; and

[65] Pauly Sias 2017 interview, cited in Roberta Nakoochee, *Reconnection with Asi Kéyi: Healing Broken Connections' Implications for Ecological Integrity in Canadian National Parks* (MA Thesis, University of Guelph), p. 72.
[66] Canada, Kluane National Park and Reserve, First Nation Harvesting Rights. https://www.pc.gc.ca/en/pn-np/yt/kluane/activ/tradition/i#fnhr.
[67] *Kluane National Park and Reserve Management Plan 2010*, p. 31.
[68] Chris Hunter, personal communication, April 2021.

(3) “an ecological-anthropological perspective that deals with the ways in which environments influence human behaviour, virtually never the obverse.”[69]

Indigenous Peoples and newcomers had conflicting views of fire. For the settlers, the major value of forested lands was the intact timber stands. This was a commodity to be protected and harvested, which decreased in worth after burning. To Indigenous Peoples, fire was a tool in managing their environment, thereby opening the landscape, and encouraging new growth and habitat renewal for the plants and animals upon which they relied.

Controlled burning was a common practice until fairly recently. G.I. Cameron was the RCMP corporal at Fort Selkirk for 14 years during the 1930s and ’40s. In 1984, he spoke of how the community used fire for clearing excess vegetation and insect control:

That is all open ground in front there. We used to keep that all burnt off in the spring. There was very short grass. There was beautiful crocuses in the spring. And we had no mosquitos. For that reason, there was no trees and the grass was cut down.[70]

Elder Phyllis Vittrekwa of Dawson City also spoke of spring burning carried out farther north:

My dad used fire to burn grass at our spring/summer camps out on the land and I seen grass being burnt in town as well. Reason, there were no lawn mowers in the day. Fire promotes new growth. Always good to have grass instead of just mud/clay. I heard some say just leave the forest fires burn if they don't pose immediate danger. This promotes new growth. [71]

It has been suggested by various experts that controlled burnings in spring and fall can lessen the catastrophic effect of lightning fires during hot, dry periods. The combination of small intentional burns and larger lightning-caused fires can create a more diverse vegetation mosaic rather than the “even age stands” that characterize large burn areas.[72] Increasingly, scientists and resource managers have recognized the value of cultural burning. Worldwide, there have been numerous studies to document the history, purposes and benefits of this practice and to validate Indigenous resource management by intentional burning.

[69] Henry T. Lewis, “Traditional Uses of Fire by Indians in Northern Alberta”, in *Current Anthropology*, Volume 19, Number 2, University of Chicago Press Jnls.
[70] G.I. Cameron interview transcript, in Dobrowolsky ed., *Fort Selkirk Oral History Project, 1984* (Government of Yukon, Heritage Branch), p. 96.
[71] Phyllis Vittrekwa, email communication, 10 February 2021.
[72] Christine Boyd, *The forest resource in the Greater Kluane Land Use Planning Area, Yukon Territory: a preliminary report* (prepared for The Greater Kluane Land Use Planning Commission, 1989).

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Note: Most useful entries from the following are listed individually under relevant sections.

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2006 *Kluane Lake Research Station Bibliography*. [Calgary, Alta: Arctic Institute of North America]. http://www.aina.ucalgary.ca/scripts/minisa.dll/144/klrs?DIRECTSEARCH

Kelsall, J.P. with E.S. Telfer and T.D. Wright
1979 *The effects of fire on the ecology of the boreal forest, with particular reference to the Canadian north: a review and selected bibliography*. Canadian Wildlife Service, Occasional Paper 32. 58 p. EMR SD421 K44 1977 c.1
Much about characteristics, classification of boreal forest areas, the agency of fire, and its effects on various species. No mentions re Indigenous uses of fire.

Patterson, Laura
1972 *Annotated Bibliography of Kluane National Park, Yukon Territory*. Edmonton, Alta.: Canadian Wildlife Service. KNPR Library
Includes literature on geology, geomorphology and glaciology, hydrology, vegetation, wildlife, and fish of the area. Does not include any materials on ethnology and human history, apart from mountain climbing and mountaineering. Includes one possibly useful doc by G.W. Scotter, "Effects of forest fires on the lichen winter ranges of barren-ground caribou in northern Canada." [see full citation in Publications & Reports]

Scace & Associates Ltd.
1975 *The Kluane National Park Area: An Initial Bibliography*. © Parks Canada, Dept. of Indian and Northern Affairs. KNPR Library
[As mentioned in Appendix A, this compilation is incomplete/ limited re history, human ecology. Entries re forests fairly general or have been identified elsewhere.]

_____ *Kluane National Park, Yukon Territory: A review of resources and research*. © Parks Canada, Dept. of Indian and Northern Affairs. KNPR Library
[Useful section titled "Flora and Vegetation of the Kluane National Park Area, A Short Note" with summaries of a few articles cited in Publications and Reports section.]

Sutherland, Dr. Colin R.
2020 *Indigenous Fire Knowledge in Canada: an annotated bibliography for the conservation through reconciliation partnership.* 27 p.
As mentioned in the bibliography introduction: the literature in this bibliography is grouped into six categories:

1. General reviews of traditional and Indigenous burning (3)
2. Co-authored accounts of Indigenous burning in Canada (2)
3. Settler accounts of Indigenous burning in Canada (5)
4. Lessons from other settler-colonial nations (4)
5. Welcoming Indigenous fire knowledge and practice (3)
6. Key Government and Partner Reports (6)

Very useful in that Sutherland provides a detailed description and analysis of sources cited.

Wright, Allen A.
1978 *The Kluane Area: an interim review of the literature of its human history*. Winnipeg, Parks Canada. YA 971.91 Wri EMR FC4014.K58 P381
A selective—and as mentioned by Mr. Wright—incomplete summary history of Kluane area. Describes the archaeological studies, early exploration period, mountain climbers, big game hunters.
Little about early Indigenous trade, Chisana Rush, or Alaska Highway construction. Nothing re fire.

Yukon Archives
2006 *Alaska Highway and Canol Bibliography*. 3rd Edition, March 2006. https://yukon.ca/en/alaska-highway-and-canol-bibliography
Not useful re wildfires.

Yukon Tourism and Culture
2003 *Preliminary Inventory to the Allen A. Wright fonds*. Includes maps, photos, manuscripts, etc. held at Yukon Archives. See note above. Photos, which were not reviewed, might be more helpful.

Church Records

Anglican Church, Diocese of Yukon Records

Location	File #	Description	Date
COR 309	2	Correspondence to and/or from Bishops Greenwood, Marsh and Frame, R.T. Clennett, John Watts, Rod Tait, Arthur Privett, John Ligertwood, Wylie and Collins, territorial land agent and others regarding sale of church property in Haines Junction, Klukshu, operating costs of rectory, property at Beaver Creek, property title, building a new rectory in Haines Junction … paper regarding Kluane Park, etc. [not consulted]	ca.1954-1985

Government Records

Government of Canada

Legislation
Canada - 23 Elizabeth II, 29th Parliament, 2nd Session (1974): 93-124
An Act to amend the National Parks Act, assented to 7th May, 1974.
p. 98 - C.II. (1) reserves for National Parks may be set aside re pending settlement of any claims of native origin, permitting ongoing traditional hunting, fishing and trapping activities.

Indian Affairs
Canada, Indian Claims Commission
Purdy, Sheila and Alan Holman

2007 Indian Claims Commission: *Kluane First Nation, Kluane National Park and Kluane Game Sanctuary Inquiry*. eBook
https://central.bac-lac.gc.ca/.item?id=Kluane_final_en&op=pdf&app=Library

- Good summary of history of Southern Tutchone people in Burwash Landing area and impacts of the establishment of the Kluane Park and Game Sanctuary.

Claims implementation - CYI [Council for Yukon Indians] - Band final agreement (Kluane Tribal Council) - Yukon First Nation final agreements - Kluane National Park & Game Sanctuary.
Date: 1988-1994
Reference: RG10, Accession number: 99-1222 VFRC, Box number: 6, File number: EXE 7320-9KTC, File part: 2; File no. EXE 7320-9KTC
Item ID no. 5188661
Link: http://central.bac-lac.gc.ca/.redirect?app=fonandcol&id=5188661&lang=eng

Dept. of Indian Affairs and Northern Development fonds
An agreement in principle with respect to Kluane National Park.
Reference: RG22-C-1-a, Volume number: 781, File number: [B-8245-102-11-1]
Date: 1982/12/16
Item ID no.: 1703825
https://www.bac-lac.gc.ca/eng/CollectionSearch/Pages/record.aspx?app=fonandcol&IdNumber=1703825&new=-8585831471953657671

Indian Affairs Annual Reports
Reports checked that included the term "Kluane"
1905, 1908, 1909, 1960, 1961, 1964, 1970, 1971, 1972, 1973, 1982, 1983, 1985, 1987, 1989, 1990, 1991, 1992. Any reports with relevant information listed below.

1960 - Item no. 34469
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/first-nations/indian-affairs-annual-reports/Pages/item.aspx?IdNumber=34469
p. 71 – "Renewed interest in trapping was evident with an increase in the price of fur. As the result of a survey, the quota of catch in the Kluane Game Sanctuary was increased to 140 muskrats per trapper. There is every evidence that this type of controlled trapping will progressively increase the catch."

1961 – Item no. 34529
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/first-nations/indian-affairs-annual-reports/Pages/item.aspx?IdNumber=34529
p. 75 - "Trapping and commercial fishing are steadily becoming more and more important to the Indian economy. The quota in the Kluane Game Sanctuary project was increased to 157 this year and it would appear that this controlled endeavour will expand considerably."

1971/72 – Item no. 36715
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/first-nations/indian-affairs-annual-reports/Pages/list.aspx?k=Kluane&&p_ID=30

- Mentions three tracts of land being set apart as national parks including one at Kluane in YT.

1988/89 – Item No. 39966
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/first-nations/indian-affairs-annual-reports/Pages/item.aspx?IdNumber=39966
p. 26 – "In the Yukon, the Greater Kluane Regional Planning Commission was appointed in August 1988, the first such commission in the territory."

1989/90 – Item 40153
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/first-nations/indian-affairs-annual-reports/Pages/item.aspx?IdNumber=40153
p. 61 – "The Greater Kluane Planning Commission continued to meet with the general public and special interest groups for the development of a Greater Kluane Land Use Plan, scheduled for completion in September 1990."

1990/91 – Item 40475
https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/first-nations/indian-affairs-annual-reports/Pages/item.aspx?IdNumber=40475
p. 56, 69 – ref to commitment to complete Greater Kluane land use plan.
p. 70 – "The White River First Nation was officially constituted as an Indian band. This was the final step in the division of the Kluane Tribal Council into two bands, based on differences in geography, language, tradition and culture."

Indian Affairs and Northern Development, Forest Resources
1996 The Role of Fire in the Yukon Boreal Forest Workshop. Whitehorse, Yukon, Feb. 6, 1996. [Detailed description of fire management program in the Yukon and fire statistics. Very useful.]
p. 3 - "It is unique to the rest of Canada in that it is the only fire management program administered by the Federal Government. The area of land under the control of the Government of Canada amounts to about 99% of total Yukon lands. Fire suppression services on other lands such as Yukon Government and National Parks is delivered by DIAND, …" KNPR Library

Parks Canada, Indian and Northern Affairs
n.d. "Human History of Kluane National Park Area." 14 p. typescript, no author, no date, no citations, not especially useful. Briefly covering "human history" from archaeological record to mountaineering exploits with lots of gaps. KNPR Library

Dept of the Interior

McArthur, J.J.
1897 "Exploration of the overland route to the Yukon by way of Chilkat Pass," in *Dept of the Interior, Annual Report*, pp. 128-140. YA Coutts 971 Can 1897
- Describes trip into Yukon interior in 1897 season. Good descriptions of people met along the way, vegetation, first cattle drive over Dalton Trail, no mentions of fire in Kluane area.

Northern Administration Branch (LAC RG85)

Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.

Vol. 1498, file 441-1-1, pt. 2 – Yukon forest fire reports, 1951-53.

North-West Mounted Police Annual Report

1898 Report of Superintendent S. B. Steele: p. 20, "Forest Fires" (copied in full in Appendix)
Annual Report of Superintendent Z. T. Wood. NWMP, Tagish
p. 41 – "Indians" – brief description of people at and around Dalton's Post. Copied in notes.

Royal North-West Mounted Police Annual Report

1913, 1914 Annual Reports. [Mentions of police observations and work during Chisana Gold Rush]

Environment Canada, Parks

1987 *Preliminary Fire Management Plan – Kluane National Park Reserve*. Park Warden Service, Kluane National Park Reserve, Haines Junction, Yukon Territory.

Kluane National Park Management Board, Champagne and Aishihik First Nations, and Kluane Tribal Council

2010 *Kluane National Park and Reserve Management Plan*.
https://www.pc.gc.ca/en/nature/science/conservation/ie-ei

Canada, Panel on the Ecological Integrity of Canada's National Parks

2017 *"Unimpaired for Future Generations"? Vol. II: Setting a New Direction for Canada's National Parks.* http://publications.gc.ca/collections/collection_2017/pc/R62-323-2000-2-eng.pdf

Privy Council fonds [LAC]

Department of National Defence – fire protection, etc., including appointment of warden, Kluane Lake 1943-1947.
RG2-B-2, Volume number: 72, File number: D-19-D-13; Item ID no. 1443371

Department of National Defence – joint defence projects (publicity and censorship) – fire protection, etc., including appointment of warden, Kluane Lake.
1943-1945/06
RG2-B-2, Volume number: 32, File number: D-19-D-13; Item ID no. 1442835

Truth and Reconciliation Commission of Canada

2015 *Honouring the Truth, Reconciling for the Future Summary of the Final Report of the Truth and Reconciliation Commission of Canada*.
https://ehprnh2mwo3.exactdn.com/wp-content/uploads/2021/01/Executive_Summary_English_Web.pdf

Yukon Government

YA, YRG 1

Location	File #	Description	Date
GOV 1645	24035	Kluane Mail Service	1908-1915
GOV 1657	30145	Kluane Road, Surveys	1915-1920
GOV 1669	34614	Scientific Expedition to Kluane Lake [re logistics for a National Geographic Team to conduct aerial photography over St. Elias Mountains]	1935-1937
GOV 1681	32	Kluane National Park	1942-1950

GOV 1855	12313-2	Kluane Mining Recorders Office	1912-1919
GOV 2034	1729	Proclamation re: division of districts (petitions re change in location of mining recorders offices. Inspection of Kluane and White River districts. Maps and photos) (33 photos to accompany a report by L. T. Burwash on the White River District 1908 transferred to miscellaneous photo collection)	1907-1909

Maps

Cairnes, D.D.
1915 Diagram of SW portion of Yukon Territory. Useful map show travel routes and place names in use at this time.
gscmcm-map-1491-sw-portion-of-YT-1915.pdf

McConnell, R. G. and D. D. Cairnes
1917 Kluane Lake, Yukon Territory (115G/2,5,6,7). 152A [cartographic material] / geology by R. G. McConnell and D. D. Cairnes. Ottawa: Geological Survey of Canada
https://emrlibrary.gov.yk.ca/gsc/Geology%20Maps/152A.pdf

Johnson, Frederick and Hugh M. Raup
1964 *Investigations in Southwest Yukon: geo-botanical and archaeological reconnaissance*. Includes detailed fold-out map of Kluane area showing roads, archaeological camps and ancient shorelines. [See Publications and Reports for full citation.]

Yukon Archives Maps

YA no.	Description	Date
H-44	No. 2 sketch of Kluane, White River Trail.	[ca. 1908]
H-195	a blueprint map of Alsek, Kaskawulsh and Kluane, divisions of the Whitehorse mining district. Surveyed by H.G. Dickson, D.L.S.	1904
H-205	Canadian Routes to White River District, Yukon and to Chisana District, Alaska. Canadian Dept. of Mines	1914
H-430	Alsek, Kaskawulsh and Kluane divisions. H.G. Dickson, D.L.S.	1904
H-516	St. Elias [proposed Kluane Park boundaries]. Annotated St. Elias NTS (National Topographic System) map from 1964. Outlines on the map indicate the Kluane Game Sanctuary, Kluane Park Reserve, Kluane Park Proposal, and Core Area Only.	1975
H-524	Canadian Routes to White River District, Yukon and to Chisana District, Alaska. [a blueprint map]	1914
H-582	Canadian Routes to White River District, Yukon and to Chisana District, Alaska. D.D. Cairnes, GSC	1914
H-747	Yukon – Kluane, White and Alsek Rivers. Map of the Yukon – Kluane, White and Alsek Rivers from surveys by the International Boundary Commission 1893-1895, J.J. McArthur 1900, A.C. Talbot 1898, J.B. Tyrrell, 1898. Includes topography along rivers, contour lines, and elevations of some peaks.	1905

H-1303	Copy of J.G. Callon map of Alsek River Basin, with annotations showing Dalton Trail and Chilkat Pass. Map no. 6. J.G. Callon / surveyor.	[19--]
H-1312	Kluane – General. Topo map, St. Elias, Yukon. Scale 1:506,880. Canada, Dept. of Mines and Resources, Survey and Engineering Branch, Hydrographic and Map Service. Early, cost 25¢.	n.d.
H-1313 (A-C)	Kluane – Mining. Three Northern Cordillera Mineral Inventory maps revised to 1977 complete with annotations made by A.A. Wright in 1978, dealing with the Alaska Highway. A) Sheet 115A, Dezadeash, with annotations showing Bob 1- 12 and War 1- 12; B) Sheet 115B + C, Mount St. Elias with annotations crossing out Kluane National Park segment of the Alaska Highway (54 x 69 cm); C) Sheet 115 F + G, Kluane Lake with annotations crossing out Kluane National Park segment of the Alaska Highway.	1977-78
H-1315	N.T.S. map 115 B + C with annotations concerning the Alaska Highway and its impact on the Kluane Region.	1970
H-1316 A-B	Maps of the Kluane region, Alaska. A) A.T.S. map of McCarthy, Alaska (topographic); B) A.T.S. map of Skagway, Alaska- Canada (topographic). U.S. Department of Interior Geological Survey / surveyor.	1973
H-2305	Aishihik land use permits. Map accompanying monograph showing area used or proposed in land use (sic) organization for area from Aishihik south to Alaskan Highway from Champagne to Kluane Lake. Kevin O'Reilly author.	1984
H-6100	Alsek, Kaskawulsh, and Kluane divisions of the mining district, Whitehorse. Map shows mining divisions, settlements, trails and part of British Yukon railway. From Alaska boundary to Whitehorse. H.G. Dickinson, D.L.S.	1913
R-241	Map of part of the Yukon Terr. showing wagon and winter road built during the summer of 1902 under the direction of the Honourable James H. Ross, Commissioner of Y.T.	1902
R-346	Alsek, Kaskawulsh and Kluane divisions of the Whitehorse mining district. H.G. Dickinson, D.L.S. / surveyor.	1904

Manuscripts

Julie Cruikshank.
Accession no. 82/220. Location MSS 044
Transcripts of interviews with women elders. Includes Angela Sidney's stories of the Crow Cycle including how Crow obtained the sun, moon, stars and daylight.
"Like now if baby asks for sun, moon, you say, 'That's your grandfather's fire.' "

Allen Wright fonds.
Accession no. 83/21. Location MSS 131.
1981-82 *Kluane*, Draft manuscript of an unpublished monograph.

Newspapers

Whitehorse Star

Date	Writer	Headline / Notes
1902-08-30		Yukon Directory. Under N.W.M.P. detachments: Dalton Trail Post – Insp. McDonald; Dalton House – Const. Hume
1904-04-22		New Maps. Ref to new map, "compiled from official maps and charts" of the Alsek, Kaskawulsh and Kluane district. "This latter map will be of great assistance to all desiring information of the various placer mining divisions."
1904-05-09		It Looks Good – Bullion Creek's Greatest Drawback is Water—Big Pans Taken Out" – letter from miner B.F. Hainer mentioning having to build four fires to thaw frozen ground to bedrock, and having a hard time getting firewood.
1904-07-18		Capt. Macdonel of NWMP stated that Pleasant Camp was currently HQ of a party of Canadian and American surveyors marking the international boundary line.
1908-03-04		"To Ferry Donjek – Board of Trade to Aid White River Country" Whse. Board of Trade discussing construction of a summer cable ferry over Donjek River.
1908-05-29		"Fires are Raging – Country Along the Yukon is Being Devastated" - Fires around Yukon Crossing and Tantalus, apparently started by neglected campfires of those travelling in small boats, are now covering 1000s of acres.
1908-09-11		Two articles touch on competition for best route to Chisana country: west from Whitehorse, or from Dawson up Yukon River then inland from mouth of White River.
1909-03-12		"News of Burwash is Confirmed – Paystreak Seven Feet Deep and Sixty Feet Wide Located Nearly Entire Length of Creek …"
1910-07-29		"Heavy Rains Work Havoc" Damage to Highways and Bridges in Southern Yukon will Amount to $25,000 …" - estimate of $10,000 damage to Kluane road, bridges and washouts
1912-05-31	copied	"Public Notice – Prevention of Forest Fires" The ordinance of the Yukon Territory respecting the Prevention of Forest Fires and being Chapter 74 of the Consolidated Ordinances of the Yukon Territory …"
1916-06-30	copied	"Forest Fires – Partly Cause of Sweltering Heat Wave in Whitehorse" – mentions fires "raging" in vicinity of Tagish and Marsh lakes as well as region between Whitehorse and Carcross. Warning re carelessness of campers.
1942-11-27		"Hon. Ian Mackenzie Expresses Canadian Sentiment in His Address at Opening Ceremony of the Alcan Highway." -account of official opening of Alaska Highway at Soldier's Summit.

1944-07-14		"Dominion Experimental Sub-station being established in the Champagne area." Re opening of 800-acre experimental farm, 106 mi. west of Whse.
1956-03-29	copied	Ottawa by J. Aubrey Simmons. Copied section re Northern Affairs, fires and fire prevention.
1958-07-17		"Takhini Fire – Forest Men, Army, RCAF, Civilians Battle Fire" "Over 750 square miles of the territory had been burned off at the beginning of this week. The dry danger area is approximately 190 miles wide with Stewart Crossing as central axis of an area extending south to the B.C. border. … "A total of 67 fires have been reported this year with 21 still burning, 14 being fought and seven more in remote areas where no fire fighting is possible. "Heaviest concentration of personnel and equipment is in the Whitehorse area where almost 100 men are battling the Laberge and Stoney Creek blazes. … "Still regarded as dangerous is the blaze along the Alaska Highway from Mile 968 to Mile 933, referred to as the Stoney Creek fire. "Under forestry engineer George Wilson, personnel from the Army, air force, territorial government, reserve army and civilian fire fighters are concentrated mainly on control of this fire. Worst Night "At that time, fires from Mendenhall Creek and Stoney Creek joined to sweep towards Whitehorse. "Spurred on by a forty-mile-an-hour wind the two fires covered an area of about 32,000 acres. "Both began as small fires, the Mendenhall blaze being reported two weeks ago and the Stoney Creek fire reported July 3 at Mile 956 maintenance camp, where it apparently started about 100 feet from the campsite."
1958-07-24		"Rain saves city as fire advances" "Rain saved Whitehorse last week. If it hadn't come, forestry officials say there would have been little hope for the town with a 30-mile front of fire advancing. In some places 20 miles away, the fire came up within five miles of the White Pass tank farm and was seen plainly from city streets Friday evening. "With continuing showers, forestry personnel took advantage of cooler weather and lessened fire hazard to push ahead with fire breaks. Today 65 men with nine cats are widening guards around the 400 square mile fire area to prevent flames jumping in case of high winds. "Area burned by the combination of the Stoney Creek, Mendenhall and Laberge fires extends from Mile 968 south to Mile 930 and from the Ibex River Valley to Mile 25 on the Mayo Highway. … "Not able to relax yet are about 60 CNT linemen who have been working along the highway repairing lines.

		"With 100 poles burned off south of Whitehorse and another 60 or more north of here, the men have kept 24 hour shifts to maintain communications. Emergency Session "Nobody outside was more worried than local inhabitants who were told by Mayor Gordon Cameron to prepare for emergency evacuation. "It was decided at a meeting of city councilors and prominent transportation and communication personnel that in event of the fire getting too close, local residents would be sent to Carcross either in their own cars or by special White Pass trains. "Arrangements were made for extra police in this emergency. "Among casualties in firefighting to date have been Banff warden J.A. Syme whose back was hurt when a tree fell on him in the Takhini fire. Mr. Syme was sent to Edmonton for treatment this week. … "Not assessed are Indian homes and traplines burned out. According to local Indian affairs representatives there are at least 12 native families affected and many more will turn up later after fishing season is over. "Smoke is hampering bush plane schedules too, which seriously affects exploration companies. According to one mining man a whole season may be lost this year through delays on account of fires."
1959-04-09		"Forestry People Better Armed This Year to Face Fire Outlook" -mentions greater precautions after the "1958 forest fire holocaust". A total of 1,554,402 acres or 2,429 square miles were burned. -ref to previous August visit of J.C. McLeod, head of the forest fire division of the northern affairs forestry branch, and later McLeod report. -new warden station to be set up at Mile 1202.
1959-05-15	copied	"Federal mammologist recommends Park lands be set aside in Yukon before too late." Argues game sanctuary not enough, suggests having three smaller sanctuaries instead.
1961-04-20	copied	"Burwash people to trap rats" – re Burwash people granted permits to trap 2500 muskrat in the Kluane Lake area, 2nd year of this arrangement.
1961-06-01	copied	"Public Notice – Burning Permits" -re regulations for burning and conditions for issuing permits.
1966-06-13	copied	"Forest Fires Blazing" Report on fire situation in YT.
1971-07-02	Jeanne Gwartney	Kluane Lake News – "It's raining cats and dogs outside, but it's a lot better than that smoke that was blanketing the Kluane Lake last week."
1973-06-04	copied	"Gophers Still Eaten" – open letter to Game Branch with Band Council Resolution re opposition to unnecessary shooting of small rodents such as gophers in Duke Meadows for target practice.
1973-12-12	Copied	"Fish-Bowl" concept unnatural

		-re YANSI opposition to establishing national park until [land claim] negotiations completed. "We suggest that the government would be acting in bad faith to establish this region (Kluane) as a national park at this time . . . while … government is negotiating with us on the basis that we are still the lawful owners of the land," YANSI president Joe Jacquot said." "Chief Smith also suggested that Kluane Park and the game sanctuary attached to it be turned over to the Indian people to manage and control as they will be able to maintain it in its natural state." "The CYI brief criticized what it termed the parks branch 'fish-bowl' concept of preserving land in its natural state likening it to a 'petrified forest.'" "The government experts claim that no animals, no birds should be hunted or trapped, that no cutting of timber should take place, that no fires should be allowed to burn in the parks and that people should be kept out except to look as this will disturb the delicate balance of nature," said Chief [Elijah] Smith.
1975-12-19		"Kluane could be Park in four months or so" Had been game reserve for more than 25 years, "Three years ago it became a park by order in council and since then the boundaries and regulations for running the park have been completed." "Although the park boundaries will become law when the gazetting is completed, they are still subject to change depending on the outcome of Indian land claim settlements."
1976-06-16		"Kluane Park Plans Info Program" – first interpretive programs offered at KNPR: slide and lecture programs, guided walks, extended overnight excursions and campfire talks.
1977-08-17		"New Kluane Campground" re opening of Kathleen Lake campground. Includes fire regulations, campfires only in fire boxes at each site.
1979-05-30	David Tait	"Kluane Game Protest – Natives Trying To Save 'A Way Of Life'" Hunting parties to go out from camp set up at Pickhandle Lake, the first of several hunting and trapping sorties in the sanctuary. "Easterson said this latest, more militant stand by the Indians of the area, who mainly live at Burwash Landing, was sparked by the territorial government's refusal to allow children from the Kluane Tribal School to learn traditional methods of hunting and trapping in the sanctuary." copied
1980-05-08	Heather Stockstill	"KTB may sue YTG for hunting rights" KTB stated two band members illegally charged with taking muskrat out of Kluane Game Sanctuary. One of men charged, was in hospital apparently suffering from a stroke. "Indian people, especially in the Kluane area, have been harassed for the past 40 years"
1980-07-02		"Lightning fires up forests" Summary report of fires happening all over territory. copied
1983-06-30	Anne Tempelman-Kluit	"Appeal court says Indians can hunt in game sanctuary" – Yukon court of appeal upholds decision allowing Indigenous hunters to harvest in game sanctuaries. copied

1983-08-01		"Burwash elder case appealed" Re civil suit against YG Renewable Resources Minister Swede Hanson re his potential role in inducing an elder's stroke after encounter with conservation officers in game sanctuary.
1983-09-26		"Sanctuary may be opened" At mtg. in Burwash Landing, YG Renewable Resources minister Howard Tracey quoted re complaints of "British Columbia and Alaska natives hunting in the sanctuary" and pressures to open area to all hunters. copied
1983-11-25	Becky Striegler	"Supreme Court leaves hunting decision alone" Supreme Court of Canada denied appeal of lower court ruling stating that "Indian people have a right to hunt in game sanctuaries." copied
1990-08-21	Wm. D. MacBride	Star Memories, "The Dalton Trail Story: 305 miles from tidewater to the river." Includes four photos from MacBride Museum and a boxed sidebar: "A brief summary of Jack Dalton's career." (copy in KNPR files) -description of trail and early history during Klondike Rush, good background, not much re vegetation or anything re fire.
1991-12-11	Sarah Davison copied	"The Kluane First Nation is the first in the territory to release a conservation strategy." Concerns include pollution of land and waters, wildlife management practices leading to decline of animal populations, waste disposal, water quality, overhunting, lack of enforcement of hunting regulations locally, inadequate tourist facilities, mining industry that not well-regulated, unsustainable development practices. "The environment and protection of ecosystems are the foundation of the plan's principles and objectives, many of which call for greater involvement of the Kluane First Nation in resource management."
1994-11-17	Laurel Jenkins	"Beetles devouring spruce in Kluane Park vicinity." -detailed discussion of possible threat of fires and using "intentional burning" to reduce fuel loading and beetle populations" copied
1995-08-29	Mario Mota	"Removal of infested trees called challenge." "Like in 1994, nearly half of this year's infestation is located in the Shakwak Valley and Kluane National Park in the Alsek River Valley." Can. Forest Svces. Predicts increased tree mortality in Dezadeash River Valley and Kathleen Creek areas in 1996. "They also expect expansions within Kluane National Park, particularly in the Bates and Mush Lakes areas, and in Fraser Creek, where large areas of mature spruce have remained largely unattacked."
1995-10-04	David Hedman Yukon Forest Coalition	"Forestry: better communication needed" Open letter to Northern Dev. Minister Ron Irwin and Renewable Resources Mickey Fisher. Long letter addresses DIAND preparedness for and methods of forest fire suppression; "DIAND's plan to clearcut in KNPR; and other matters re timber / forest policy.

1996-01-31	Mario Mota	"Cold won't kill spruce beetles." -about 47,000 ha. of trees killed by beetles in Kluane-Haines Junction area "Bark beetle scientists say infested trees can stand for 10 years or more and the timber can still be economically viable. "Still some say the trees should be removed quickly because they'll be a huge forest fire risk when they dry out. "Others point out, however, that the Kluane-Haines Junction area is not a high-risk forest fire district."
1996-12-04		"Axe the dead trees, leave the living ones." Letter to ed. from 20 residents of Haines Jct. Concern re forestry practices of DIAND and their perceived refusal to consider opinions of local residents.
1997-01-14		"Kluane logging plan proves divisive" "the people who live in Kluane have lots to offer in the way of First Nations traditional knowledge, scientific observations and as year-round observers of this wondrous part of the world." An estimated 2.7 million to 3.5 million cubic metres of timbre are affected outside of KNPR along, by [spruce bark beetles].
1998-07-29	John McHutcheon	Isolation helps parks score well in report. "While 23 of the 36 parks in the 1997 *State of the Parks* report have major or several environmental impacts from outside sources, the territory's Vuntut, Ivvavik and Kluane National Parks had lower stress levels from external factors." …. "McNamee also pointed out that Kluane's natural forest fire cycle has been affected by land management. The cycle is now less than 10 per cent of its historic trend. "Kluane park warden Anne Morin said fires there are fairly infrequent. Those that do start are assessed by park staff and the Dept. of Indian Affairs and Northern Development to decide what action should be taken." "Thorough land use planning that gives full consideration of thing like the preservation of natural wildlife corridors connecting the park to neighbouring hinterlands are steps that can be taken to guard again the erosion of Kluane's integrity…"
1999-06-14	Chuck Tobin	"Fire prompts state of emergency declaration." Re fire threatening Burwash Landing, human caused near community dump.
1999-10-21	Chuck Tobin	"Yukon park seen as only one free of threats" [ref to Vuntut NP] "Peepre said Kluane park officials cited agricultural pressure, human disturbance, nearby mining, sport fishing and urban development as some of the issues causing concern for the Yukon's international jewel."
1999-11-24	Jason Small	"Yukon first nations inherit federal powers" "The agreement gives those First Nations who have self-government agreements, the power and the money to operate programs previously run by Ottawa."

		"The new deal, the first one to transfer powers from the Northern Affairs section of DIAND, does not include fighting forest fires. "Canada will continue to fight fires on settlement land, …"
2002-02-08		"Indian Claims Commission hears testimony" Mentions in 1983, Ottawa amended National Parks Act to allow hunting in the park and the successful Yukon Court of Appeal challenge by first nation citizens to hunt in the sanctuary.
2009-07-30	Stephanie Waddell	"Fire ban mount as scorching summer heat wave sears on" Parks Canada banned all open fires in KNPR including fire pits and wood stoves. All 10 zones listed as extreme or high fire danger rating.
2015-05-20		Lighting starts 10 new forest fires – Kluane National Park issues fire ban.
2016-08-08		"Officials monitoring latest fire." Human-caused .3 ha burning 56 km SE of Haines Jct.

Personal Narratives

Robert Seaton fonds, 82/225, MSS 40.
Robert Seaton was a member of C Company, 18th Combat Engineers, and was involved with construction of the Alaska Highway in the Kluane Lake Region, from May, 1942 to January, 1943. During this period, he wrote a diary documenting conditions in the construction camps and the lives of the work crews.

Photographs

Alamy Limited

Image Description	**Credit line**
Fireweed in burned forest, Alaska Highway near Burwash Landing, Yukon Territory, Canada. (copy ordered)	Ronald S Phillips / Alamy Stock Photo

Alaska State Library

ASL no.	**Source**	**Description**	**date**
ASL-P352-071	Fred Hovey photo coll.	"A Burnt District, familiar condition of trail." Gold seeker hiking through a burn near Champagne. Fires, or evidence of past fires, were evident everywhere along the [Dalton] trail. [cited in Gates, 2012: 86]	1898
ASL-P352-070	Fred Hovey photo coll.	Southern Tutchone people at Champlain's Landing (Champagne), 1898. [in Gates, 2012: 23]	1898

Library and Archives Canada

An image search for term “Kluane” only identified 28 images. Many were “philatelic records” [stamps]. I only listed the ones that seemed promising and copied those for which there were images.

Source	Description	Date
RG85, R216, Volume number: 14990; Item no. 2-37-24; Item ID no. 5301327	North end of Kluane Lake, where Kluane River leaves it and skirts the road. copied	1949
RG85, R216, Volume number: 14990; Item no. 5-45-7; Item ID no. 5301329	The white post on the left marks the Alaska-Yukon boundary. Ahead lies Yukon Territory, its altitude much lower than around Kluane Lake. copied	1949
Dept of Interior fonds, Box 2684; Item no. Y8-1-1; Item ID no. 3325040	Mountains seen from Whse.-Kluane Trail, Y.T. copied	n.d.
Dept of Interior fonds, Box 2684; Item no. Y12-6-3; Item ID no. 3401966	Whitehorse-Kluane trail, Y.T. copied	n.d.
RG85, R216, Volume number: 14988; item no. 43399; item ID no. 5313788	Kluane Lake on Alaska Highway. copied	ca. 1950-1960
Dept of Interior fonds, Box 2684; Item no. Y12-1-6; Item ID no. 3401616	Kluane Trail Hill at canyon below Champagne. copied	n.d.
RG85, R216, Volume number: 14988; item no. 43398; item ID no. 5313787	Burwash Flats at Mile 1105 on Kluane Lake. Shows cabin and sign stating “Burwash Flats Tourist Accommodation”. copied	n.d. likely ca. 1950-1960
RG85, R216, Volume number: 14988; item no. 43445; item ID no. 5313816	Kluane Lake looking north. [Image from hillside looking at road, small community, lake] copied	ca. 1950-1960
RG85, R216, Volume number: 14988; item no. 43399; item ID no. 5313788	Kluane Lake on Alaska Highway. Copied	ca. 1950-1960
RG85, R216, Volume number: 14988; item no. 43400; item ID no. 5313789	Kluane Lake on Alaska Highway. Copied	ca. 1950-1960
Natural Resources Canada fonds, Box no. 4766; item no. HC-12542-9; item ID no. 3199007	Alcan Military Pioneer Road showing typical finished section at left and two United States Army Engineer Generals in foreground. No online image	ca. 1942
RG85, R216, Volume number: 14990; item no. 5-37-8; ID no. 5301321	Mile 1021, Alaska Highway, with the snowy peak of Mt. Archibald shining ahead	1949
RG85, R216, Volume number: 14988; item no. 43439; ID no. 5313811	Alaska Highway looking S from Bear Creek summit.	ca. 1950-1960

MacBride Museum of Yukon History

Several MacBride Museum photo collections formerly housed in Yukon Archives, have been deaccessioned and are now held by MacBride. At present, the museum does not have resources to support an archivist or research facilities. Hence it can be difficult to track and order photos.
Although MacBride has a large collection related to the Dalton Trail during the Klondike Gold Rush era, the limited time for this contract did not permit attempting to review this collection.

Yukon Archives Catalogued Photos

YA no.	Source	Description	date
1574	R.A. Cartter fonds	[View of a stretch of unfinished road bed in the Kluane area. Equipment and residue along the roadside.] colour slide showing smoke from burning slash by roadside (ordered)	1942
4651, 4661-4664, 4680, 4685-4697, 4812-13, 4830, 4848, 4854	H. C. Barley fonds	Several Dalton Trail views, mostly at southern end in Alaska and B.C. as well as some that are presumed to be on Dalton Trail but location not confirmed. (not very useful)	ca. 1899
5706	Robert Hays fonds	[A First Nations man, Field Johnson, his horse and his fully loaded pack dog posing for the photographer. A U.S. service man is in the background.]	1942

Gordon and Lorna Walmsley fonds
A vast collection of coloured slides including several from Kluane area ca. 1969-1970. Mostly scenic with no details of location or clear vegetation details. Catalogued photo nos. 13085-13089; 13663-13673.

Yukon Archives Uncatalogued Photos

James Edward Beatty fonds
82/390, PHO 162
Listed as having Dalton Trail views; only a few photos taken in Klukwan area. Not useful.

E.J. Glave fonds
85/11, PHO 265
The photographs are from the "Frank Leslie's Illustrated Newspaper Expedition" and show Alaska villages and people, packhorses, boating and rafting, as well as portraits of Glave and Dalton, and sketches Glave made as artist of the expedition. The originals are at the University of Alaska Fairbanks, Elmer E. Rasmuson Library. Requests for copies must be forwarded to University of Alaska, Fairbanks. Made a copy of the typed caption list and a few sample photos, very vague as to contents and locations, e.g. "Scenery, river and mountains Alaska". Many photos are poor quality.

Bud and Jeanne (Connolly) Harbottle fonds
[ca. 1898] - 1977
ca. 2278 photographs: ca. 2100 col. slides, 178 b & w copy negs.
Accession 2009/87, collection of 2100 colour slides include views of Kluane National Park and Reserve. The above is in-process material may not be available to researchers.

Lux, Richard collection.
Accession no. 83/73. PHO 215, 1945–1950.
Note: There are many photographs described as “unidentified stretch of road” which may be scenes along the Alaska Highway, especially near Kluane, Burwash Landing, Tok and Fairbanks. Caption list is available. Coloured slides.

Canadian Museum of Civilization (since renamed Museum of Canadian History)
Accession no. 91/36, PHO 418.
Photos of Yukon Indigenous Peoples including photos taken at Klukshu and Isaac family bush camp on Big Arm of Kluane Lake.

Sheldon Museum collection.
79/123, PHO 119 (no online caption list)
The collection consists of black and white photos of the Royal Canadian Mounted Police (RCMP) and Pleasant Camp on the Dalton Trail, RCMP pictures of Tagish Post, Tahkeena Detachment, Yukon and pictures from Klehini River.

Summer in Kluane 1948.
Accession 2010/12, PHO 676-677
Photographs (#643-#779) taken during the 1948 summer field trip named the Andover-Harvard Yukon Expedition. The leaders were archaeologist Fred Johnson of the H.S. Peabody Foundation of Phillips Academy and Hugh Raup who at the time was Director of the Harvard Forest in Harvard, Massachusetts. Bill Drury, a Harvard graduate student was their primary assistant in botanical research and Elmer Harp Jr. assisted in the archaeological field work. Lucy, Karl and David Raup were also along on the expedition. Images include views of First Nations men packing horses at Little Arm of Kluane Lake, piles of gear to be carried, travel by pack train to areas above tree line, views from high in the mountains, their camp near Burwash, geographical formations, and research activities of the members of the expedition. Many, b + w scenery shots in Kluane area, some locations better identified than others.

Image no.	Description	date
2010/12 #464 (PHO 674)	Karl Raup and John Sticht. Climbing mountain above mile 1064, Kluane Lake [A portion of the Alaska Highway is visible.]	2 Jul 1944
2010/12 #465 (PHO 674)	Kluane Lake. From mountain slope at mile 1064 [A portion of the Alaska Highway is visible.]	2 Jul 1944
2010/12 #466 (PHO 674)	Kluane Lake. From mountain slope at mile 1064 [A portion of the Alaska Highway is visible.]	2 Jul 1944
2010/12 #467 (PHO 674)	Kluane Lake. From mountain slope at mile 1064 [A portion of the Alaska Highway is visible.]	2 Jul 1944
2010/12 #468 (PHO 674)	Mountain slopes. just S of mile 1064 - Kluane Lake	2 Jul 1944
2010/12 #470 (PHO 674)	Bluff at mile 1074 - Kluane Lake. showing Indian site locality - Kluane Lake in distance - frost polygons in low ground at right [Possibly a road on top of a hill at left. Mountains in background.]	17 Jul 1944
2010/12 #471 (PHO 674)	Kluane Lake and mountains. Panorama from about 4000 ft. on a mountain at E end of lake [Mouth of the Slims River visible. A portion of the Alaska Highway is visible. This photograph forms a panorama with 2010/12 #472 in the centre and 2010/12 #473 on the right.]	18 Jul 1944

2010/12 #472 (PHO 674)	Kluane Lake and mountains. Panorama from about 4000 ft. on a mountain at E end of lake [Mouth of the Slims River visible. A portion of the Alaska Highway is visible. This photograph forms a panorama with 2010/12 #471 on L and 2010/12 #473 on the right.]	18 Jul 1944
2010/12 #473 (PHO 674)	Kluane Lake and mountains. Panorama from about 4000 ft. on a mountain at E end of lake [Mouth of the Slims River visible. A portion of the Alaska Highway is visible. This photograph forms a panorama with 2010/12 #471 and 2010/12 #472	18 Jul 1944
2010/12 #474 (PHO 674)	Mountain - End of Kluane Lake. Views from high slope of Mountain at E end of Lake [Scenic view above tree line. Tachäl Dhäl (Sheep Mountain) in background. A portion of the Alaska Highway is visible.]	18 Jul 1944
2010/12 #475 (PHO 674)	Mountain - End of Kluane Lake. Views from high slope of Mountain at E end of Lake [Scenic view above tree line. Tachäl Dhäl (Sheep Mountain) in background. A portion of the Alaska Highway is visible.]	18 Jul 1944
2010/12 #484 (PHO 674)	Kluane Lake and south shore. view NW from "Soldier's Summit" on old road [Portion of Alaska Highway visible below.]	22 Jul 1944
2010/12 #504, 505, 528 (PHO 675)	Camp and Trapper's Cabin with Lucy Raup. end of Big Arm - Kluane Lake [Two fly tents set up in a grassy area. Lucy stands by one and a man is by the other. The roof of a cabin can be seen behind the tent in the foreground. 2010/12 #504, 2010/12 #505 and 2010/12 #528 depict the same camp.] .	20 Aug 1944
2010/12 #534-536 (PHO 675)	Kluane Lake and Camp. N. Arm? [Big Arm, Kluane Lake?]	1944
2010/12 #595 (PHO 675)	Bluff at mile 1073. showing reworked Kluane silt [Elmer Harp standing on hill. Trees killed by forest fire (?) are along ridge. 2010/12 #595, 2010/12 #740 and 2010/12 #741 are similar views.]	7 Aug. 1948
2010/12 #740 (PHO 677)	Dune hill section at mile 1073. [Man standing on hill. Trees damaged by forest fire (?) are along ridge. 2010/12 #595, 2010/12 #740 and 2010/12 #741 are similar views. 2010/12 #595, scope reads] showing reworked Kluane silt.	10 Aug 1948
2010/12 #741 (PHO 677)	Dune hill section at mile 1073. [Man standing on hill. Trees damaged by forest fire (?) are along ridge. 2010/12 #595, 2010/12 #740 and 2010/12 #741 are similar views. 2010/12 #595, scope reads] showing reworked Kluane silt.	10 Aug 1948

J. B. Tyrrell fonds

82/15, PHO 154

The Thomas Fisher Rare Book Library at the University of Toronto received J.B. Tyrrell's papers and photographs. Yukon Archives procured copies of material relevant to mining in Yukon in 1978, 1981 and 1982. Any use must credit the J.B. Tyrrell Papers, Thomas Fisher Rare Book Library, University of Toronto. Tyrrell bequeathed all copyright to his works to the University of Toronto Library. The copy prints are of poor quality, so any requests for copies should be directed to the Thomas Fisher Rare Book Library, who hold the originals.

Image no.	Description	date
82/15 #1 PHO 154	Our camp on the Chilkat River.	May 28, 1898
82/15 #2 PHO 154	Our camp on the Chilkat River.	May 28, 1898
82/15 #3 PHO 154	Mr. J.J. McArthur in camp by Chilcat River.	June 10, 1898
82/15 #4 PHO 154	Mr. J.J. McArthur in camp by Chilcat River.	June 11, 1898
82/15 #5 PHO 154	Packing our horses at camp beside the Chilcat River.	June 11, 1898
82/15 #6 PHO 154	Cattle crossing Kluhini River.	1898
82/15 #7 PHO 154	Cattle crossing Kluhini River.	1898
82/15 #8 PHO 154	N.W.M. Police Camp on Dalton Trail.	1898
82/15 #9 PHO 154	N.W.M. Police Camp on Dalton Trail.	1898
82/15 #10 PHO 154	Getting out timber at Police Camp, Dalton Trail.	1898
82/15 #11 PHO 154	Getting out timber at Police Camp, Dalton Trail.	1898
82/15 #12 PHO 154	Sawmill at Police Camp.	1898
82/15 #14 PHO 154	Looking up tributary of Chilkat River.	1898
82/15 #15 PHO 154	Horses fording Chilcat River near its source.	1898
82/15 #16 PHO 154	Gorge in schist near head of Alsek River.	June 22, 1898
82/15 #17 PHO 154	Pack train, climbing up trail out of gulch.	June 23, 1898
82/15 #18 PHO 154	Miskatahin Village [Neskatahin].	June 23, 1898
82/15 #19 PHO 154	Unpacking the horses.	June 23, 1898
82/15 #20 PHO 154	Dalton's Post.	June 23, 1898
82/15 #21 PHO 154	Dalton's Post beside the Alsek River.	June 24, 1898
82/15 #22 PHO 154	View up valley of Klukshu River.	June 27, 1898
82/15 #23 PHO 154	Dalton's Pony Express.	June 29, 1898
82/15 #24 PHO 154	Dalton's Pony Express.	June 30, 1898
82/15 #25 PHO 154	East of Lake Dezadeash.	June 29, 1898
82/15 #26 PHO 154	Party, including a woman, crossing the Kluhini River.	June 30, 1898
82/15 #27 PHO 154	Alsek River, as seen from summit of Mt. Kelvin 5000 ft. above it.	July 3, 1898
82/15 #28 PHO 154	Packing horses.	July 5, 1898

Publications & Reports

Notes: Given the volume of items reviewed, it was decided to group these into two sections: Yukon Resources, and Other Resources. The latter include references to national and international examples as well as documents with more general content regarding fire management. For the Yukon material I made one exception, including a few articles re the Gwich'in people of the Alaska interior. Since historically the Gwich'in occupied an area spanning what is now the Yukon Territory and state of Alaska, it made most sense to include with the Yukon publications.

As much as possible, each item was annotated with a summary of relevant information as well as noting items that were not particularly useful or not reviewed during this survey.

YUKON RESOURCES

Auer, Harry

2007 *Campfires in the Yukon*. Whitefish, Montana: Kessinger Publishing. [Originally published Cincinnati: Stewart & Kidd, 1917] WPL 799.29712 Aue NC

[pp. 35-37, description of construction of Indigenous caribou fences in area. pp.132-136, Auer describes a moose drive on the St. Clair River, tributary of the White River, using trees set afire. Includes helpful diagram.]

Berg, Edward E. and J. David Henry

2003 *The history of spruce bark beetle outbreaks in the Kluane region as determined from the dendrochronology of selected forest stands*. [Haines Junction, YT]; Parks Canada. EMR SD945.S69 B4 2003

[This outbreak was a key contributor to more recent fires in area.]

Boyd, Christine

1989 *The forest resource in the Greater Kluane Land Use Planning Area, Yukon Territory: a preliminary report*. Prepared for The Greater Kluane Land Use Planning Commission. EMR HD319.Y8 B6

"The boundary of the Kluane Planning Region, was determined, not by ecological factors, but by politics and economics." An inventory of forest resources in the KPR, descriptions of methodology and limitations, dividing area into priority areas and listing types of tree species, estimates of timber volumes, "productive forest sites" and areas suitable for harvest. At that time, three sawmills operating in Kluane region as well as a chipper mill owned by CAFN. Also summary of policies in Haines Jct. area, as well as identifying possible land use conflicts and problems.

"Most forest stands in the Yukon are of fire origin and are even age stands."

Cairnes, D. D.

1915 *Upper White River District, Yukon*. Canada, Dept. of Mines, Geological Survey. Ottawa, Gov't. Printing Bureau. EMR QE185 A2 no. 50

https://doi.org/10.4095/119982

[Good description of activity in area following Chisana Gold Rush.]

1914 "Exploration in southwestern Yukon," in *Summary Report, 1914*, pp. 10-33. Canada. Dept. of Mines. Ottawa: King's Printer, c1915. EMR QE185.S8 1914

Geological investigations of SW Yukon; includes a good map showing travel routes, communities and place names in Kluane area.
https://emrlibrary.gov.yk.ca/gsc/summary-reports/GSC-Summary-report-1914-and-map/

Canada and Yukon Government
2000 *Yukon State of the Environment Report, 1999*. © YG, Dept. of Renewable Resources, 2000. Chapter 5.2 – Forests includes section on Fire Management, pp. 114-15. [useful]

1996 *Yukon State of the Environment Report*. © YG, Dept. of Renewable Resources, 1996; Environment Canada, Canadian Wildlife Services, 1996. "Section 5.2 Forests," pp. 92-95. Discusses role of fire in succession forest, Figure 5.5 illustrates "Ignition point and area of land burned by forest fires, 1946-1992." Points out that "human caused fires are clustered near settlements and roads. One can even trace the outline of the Alaska Highway on this map."

Champagne & Aishihik First Nations and and Sha-Tan Tours
1988 *From Trail to Highway – Kwädāy kwätän ts'än ck'àn tän kwàtsin: A guide to the places and people along the Whitehorse, Yukon to Haines, Alaska corridor*. © CAFN
p. 18 – section titled "Fire" with photo of fireweed in a recent burn. See chronological notes.

_____ and Tourism Yukon
n.d. "Welcome to Champagne and Aishihik First Nations Traditional Territory." Pamphlet unfolding to show area map with Indigenous place names.

Conway, Alexandra Jane
2014 *An investigation of forest-grassland dynamics in Southwest Yukon, Canada*. Thesis dissertation. [not checked] LAC

Coutts, R.
1980 *Yukon Places and Names*. Sidney, B.C.: Gray's Publishing Limited.
- origins of many non-Indigenous place names, most with short background histories.

Cruikshank, Julie
2005 *Do Glaciers Listen? Local Knowledge, Colonial Encounters and Social Imagination*. Vancouver, University of British Columbia Press.
- a fascinating look at Indigenous and colonial perspectives re glaciers but no references to forests, fires or, Indigenous land management of boreal forest.

1991 *Reading Voices: Oral and Written Interpretations of the Yukon's Past*. Vancouver/Toronto: Douglas and McIntyre.
- some interesting material about traditional travel and land use but little info re forest uses and none re cultural uses of fire.

1990 *Life Lived like a Story*. Vancouver: University of British Columbia Press.
p. 30 – reference to stories of Mrs. Angela Sidney and how "animals disguised as humans reveal their true nature by sleeping on the opposite side of a fire from humans"
pp. 73-74 – Angela Sidney's story of "How People Got Flint"

1985 "The Gravel Magnet: Some Social Impacts of the Alaska Highway on Yukon Indians," in Kenneth Coates (ed.), *The Alaska Highway: Papers of the 40th Anniversary Symposium*. Vancouver, UBC Press.
- impacts of Alaska Highway construction including limited access to traditional territory and wildlife, low fur prices, changing settlement patterns, diminishing ability of Indigenous People to follow a subsistence lifestyle and impairing their relationship with the land.

1974 *Through the Eyes of Strangers: a preliminary survey of land use history in the Yukon during the late nineteenth century*. Report to Yukon Territorial Government and Yukon Archives.
- good overview of Indigenous Peoples and land use based on archival records. Author expressed wish that this work would be a starting point for local oral history research, much of which has since taken place.

Danby, Ryan Kenneth

1999 *Regional ecology of the St. Elias Mountain Parks: a synthesis of management implications*. Waterloo: Department of Geography and Environmental Studies, Wilfred Laurier University. 368 p.: ill., maps [colour] EMR QH77.S2 D3 1999

- Looking at KNPR with the Greater St. Elias Region of North America including complex of four parks within Alaska, Yukon and B.C.: Wrangell-St. Elias National Park and Preserve, Kluane National Park and Reserve, Tatshenshini-Alsek Provincial Park, and Glacier Bay National Park and Preserve.
- Supports increase cooperation between regions in making conservation decisions. Excellent maps, extensive bibliography, did not locate specific references to use of fire as a management tool.

Dobrowolsky, Helene

2021 *Tséi Zhéłe' / Sinwaa Éex'i Yé / Conrad Historic Site Interpreters Manual*. Prepared for Carcross/Tagish First Nation and Yukon Government, Historic Sites.
- includes a unit on Wildfires, citing the Teslin burn of 1958 as creating an environment that supports some of the highest densities of moose, wolves, snowshoe hare, and lynx in the entire territory.

1997 *White River First Nation: Land Use & Occupancy Study*. Prepared for White River First Nation, 1997. (includes bibliography and chronology)

From Appendix 1: Nįį'įį 62°30'N 141 °08'W (NTS 115K/7)
- means "(game) lookout" in the local Upper Tanana language.
- according to elder Bessie John, this particular hill has great significance as it was the place where the First Nations people had their crematorium. Charcoal from these fires can still be found in the vicinity and has been carbon dated at 10,000 years old. Hill is also known locally as Sourdough Hill after a lodge, the Sourdough Inn, which was destroyed by fire many years ago. (Yukon Geographical Names Board)

1995 *Law of the Yukon*. Whitehorse: Lost Moose Publishing. (includes account of impacts of construction of Alaska Highway)

1985 ed. of *Fort Selkirk Oral History 1984*. Gov't. of Yukon, Heritage Branch.
- interview with former RCMP G.I. Cameron speaks of controlled burning at townsite in spring.

_____ with Joelle Ingram and Rob Ingram.
2020 *Yukon Beringia Interpretive Centre, Interpreters Manual*. Prepared for Government of Yukon, Historic Sites. (source of info for Little John Site)

Douglas, George W.
1974 "Montane zone vegetation of the Alsek River region, southwestern Yukon," in *Canadian Journal of Botany*, vol. 52, no. 12, pp. 2505-2532. EMR QK203.Y8.D68 1974; YA 580 Dou 1974
One of objectives of this study was "to interpret the vegetation pattern of the region with respect to fire and geomorphological history."

Emmons, George Thornton
1991 *The Tlingit Indians*. Edited with additions by Fredericka de Laguna and a biography by Jean Low. Vcr./To.: Douglas & McIntyre; New York, American Museum of Natural History.
pp. 158-159: story of how Raven convinced Sparrow Hawk to collect fire from the sea; also detailed descriptions of fire-making methods using fire drills and strike-a-lights.

Environment Canada, Parks
1987 *Preliminary Fire Management Plan: Kluane National Park Reserve*. Haines Junction, Yukon: Environment Canada. Parks.
"The objectives of a fire management plan are: to allow fire to achieve its natural role within the park ecosystem., to protect property and resources from unwanted fire, and to minimize or avoid the negative environmental effects of fire and any suppression actions taken."
"The park has a long history of fire that is most probably the effect of fire use by native Indians and early European man, as opposed to natural sources. The mean fire interval for the park was calculated at 260 years and the average area burned per year was estimated at 600 ha."
"The long term objectives for fire management … involve the writing of a vegetation management plan, identification of specific vegetation, wildlife and special preservation area needs, finalization of native rights in the area and development of fire management strategies through a Fire Management Plan."
p. 17 – includes map with fire management zones: critical protection, full protection, modified action, limited action, and special preservation areas. (copied)
KNPR SD421.34.K5 P7 1987 c.2

Francis, Shawn R.
1996 "Linking Landscape Patterns and Forest Disturbance: Fire History of the Shakwak Trench, Southwest Yukon Territory." Thesis submitted to Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science in Plant Ecology, Dept. of Botany, University of Alberta, Edmonton.
Abstract excerpt: "… new landscape-based forest management initiatives are attempting to emulate natural disturbance patterns. In a fire patterned landscape such as the North American boreal forest, fire history studies can aid in obtaining this information."
pp. 21-23 briefly mentions human history in area including Southern Tutchone use of fire as a management tool. "In the Kluane Region it is known that Southern Tutchone used fire to create moose browse and thaw stream banks to aid in the collection of alpine vetch roots (Workman, 1978)."

Fuller, W.A.

1958 "Yukon National Park Survey, July – August, 1958." Typescript. Whitehorse, Canadian Wildlife Service. [very faded, can't make out page nos.] KNPR

Interesting for his criteria of why Kluane was only possible Yukon site for a national park (primarily scenery and wildlife). Mentions forest fire protection as a consideration "…and this in turn, has two aspects – fire from within and fire from without. There are probably no significant differences in the ease with which fire might start from one part of Yukon to another. For example, the McArthur area is vulnerable from all sides, whereas the St. Elias Range is unlikely to be threatened from the direction of the great ice-and-snow-fields."

One statement of interest for this study: "In attempting an objective comparison of the areas studied (with the exception of Takhini Hot Springs which was removed from consideration by forest fire on 13 July) …

Garbutt, Rod

1994 *Spruce Beetle in the Yukon*. Victoria, B.C.: Pacific Forestry Centre. 1994-1996
EMR SB945 S69.G38 1994-1996

Garbutt, Rod and Brad Hawkes, Eric Allen

2006 *Spruce Beetle and the Forests of the Southwest Yukon*. Victoria, B.C.: Pacific Forestry Centre.
EMR 634.975 267 68 Garbu
http://dsp-psd.pwgsc.gc.ca/collection_2007/nrcan-rncan/Fo143-2-406E.pdf
http://publications.gc.ca/collections/collection_2007/nrcan-rncan/Fo143-2-406E.pdf

Gates, Michael

2012 *Dalton's Gold Rush Trail: Exploring the Route of the Klondike Cattle Drives*. Madeira Park, B.C.: Lost Moose, Harbour Publishing Co. Ltd.

pp. 85-89: "Interlude—A Burning Question." Brief chapter mentions large tracts of burnt forest that gold seekers encountered along the Chilkat/Dalton Trail and contrasts Indigenous and Settler attitudes toward fire in forest management. [Includes bibliography, useful maps of the trail, endnotes and index]

Gilbert, B. Scott

1987 *Factors limiting growth of sympatric Peromyscus and Clethrionomys* [Deer Mice and Voles] *populations in northern Canada*. Lund: University of Sweden.
EMR QL737.R6.G5 1987

Glave, Edward J.

2013 *Travels to the Alseck*. Edited by Julie Cruikshank, Doug Hitch and John Ritter. Whitehorse, Yukon Native Language Centre.

- compilation of Glave's articles and diary entries documenting his trips to the area in 1890 and 1891, along with contextual material. Described as the earliest written records of the Southern Tutchone people, an important resource. Includes

Gotthardt, R. M.

1989 *Summary of historic and prehistoric resources in the Kluane planning region*. Whitehorse: [Yukon Land Use Planning], 1989. [49] leaves: ill., maps; 28 cm. Report for the Greater Kluane Regional Land Use Plan. YA 971.917 91 Gottha 1989

Graham, Angus

c1935 *The Golden Grindstone*: *the adventures of George M. Mitchell*. Philadelphia: J.B. Lippincott. WPL 971.191042 Gra NC

-The adventures of George M. Mitchell and party en route to Klondike via Mackenzie River then following HBCo. trade route into Yukon. During this expedition, Mitchell split his knee cap with an ax, but his knee was mended due to very effective surgery by two Gwich'in women. He then arranged to spend much of winter with a group of Gwich'in people in order to heal. Some of his observations re Gwich'in and fire copied in Chronological Notes.

Graydon, Donald A. and Dawn E. Hotte

1977 *1977 fire control plan, Haines Junction, Yukon Territory*. [Haines Junction, Yukon: Canadian Parks Service, 1977]1 vol (various pagings): ill. EMR SD421.34.K5 G7 1977

Green, Heather

2018 *The Tr'ondëk Hwëch'in and the Great Upheaval: Mining, Colonialism, and Environmental Change in the Klondike, 1890-1940*. Thesis in partial requirements for degree of Doctor of Philosophy in History, University of Alberta.

Several mentions of fire damage by prospectors in Klondike area, some references to First Nations camp and cooking fires, but nothing re intentional burning.

Green, Lewis

1982 *The Boundary Hunters: Surveying the 141st Meridian and the Alaska Panhandle*. Vancouver and London, University of British Columbia Press.
[Account of the survey of the international boundary line, surveyors worked south of Yukon River from 1907-1913; map on p. 150 shows routes into survey area.]

Harp, Elmer Jr.

2005 *North to the Yukon Territory via The Alcan Highway in 1948: Field Notes of the Andover-Harvard Expedition*. Yukon, Tourism and Culture, Occasional Papers in Archaeology No. 14.
https://emrlibrary.gov.yk.ca/Tourism/occasional%20papers%20in%20yukon%20archaeology/north-to-yukon-territory-via-alcan-highway-andover-harvard.pdf

Very useful, many good references and a great photo of a signal fire.

Harris, Arland S.

1996 *Schwatka's Last Search: The New York Ledger Expedition through Unknown Alaska and British America, including the journal of Charles Willard Hayes, 1891*. Fairbanks, University of Alaska Press. [see chronological notes]

Harris, Ellen

1981 "A History of the Development of Settlements in the Shakwak Valley Area," University of British Columbia, Faculty of Education, Education 479.

- useful for description of the many small camps and mining settlements in region as well as details of postwar impacts of Indigenous People, changing settlement patterns, and mining activity in region
KNPR

Hawkes, Brad
1983 *Fire History and Management Study of Kluane National Park*. Victoria, BC: Pacific Forest Research Centre. xi, 84 p.: ill., maps; 28 cm EMR 363.37 Haw 1983-12

____ *Fire history and management study of Kluane National Park* / submitted to Parks Canada, Prairie Region and Kluane National Park. Victoria, B.C.: Canadian Forestry Service.
EMR SD421.34.K5 H38 c.2

From Summary:
- Suggests human-caused fires had largest effect on "the present vegetation mosaic in the southern area of KNPR which today supports a wide variety of wildlife."
- Details re fuel types, stages in post-fire stages of vegetation, fire hazard rating system. [more notes in chronology]

____ *Fire history and ecology of forest ecosystems in Kluane National Park: fire management implications*. Victoria: Canadian Forestry Service. Pacific Forest Research Centre. 30 p., ill.
EMR SD421.34.K5 H39 1983
http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/2300.pdf

Hawkes, Brad and Rene Alfaro, Vince Waring, Jenny Berg
2014 *Response of southwest Yukon forests to spruce beetle: 2010 plot re-assessment*. Victoria, BC: Pacific Forest Research Centre. EMR SB945.S69.H39 2014
http://cfs.nrcan.gc.ca/pubwarehouse/pdfs/35443.pdf

Helm, June ed.
1981 *Handbook of North American Indians: Vol. 6 Subarctic*. Washington, Smithsonian Institute.
pp. 17-18: Animal Cycles and Fluctuations. "In addition to the continuous and regular successional stages of forestation is the effect of forest fires (Feit 1973; VanStone 1979b). Whether large or small in size, forest fires alter the vegetational food supply dramatically, thereby radically changing movements and numbers of animals by species including seasonal weather conditions, contribute to instabilities of animal habitat and populations and to human capacity to procure flesh foods."

Hoefs, Manfred
2017 *Yukon's Hunting History*. © Manfred Hoefs, AMBOCA Ecological Services.
[Useful in directing attention to Angus Graham, *The Golden Grindstone*.]

Huscroft, C. A. and P. S. Lipovsky, J. D. Bond
2004 *A regional characterization of landslides in the Alaska highway corridor, Yukon.* Whitehorse: Yukon Geological Survey. EMR QE195 O6 no. 2004-18
https://emrlibrary.gov.yk.ca/ygs/open_files/2004/2004_18.pdf

Johnson, Frederick
1948 "An archaeological, botanical, and geological expedition to the S.W. Yukon, 1948," in *American Philosophical Society Yearbook* 1948. 2 p. YA 1948-0021
- Copied. Summarizes the findings of "ancient human culture" at 20 "ancient campsites" in the Shakwak Valley. Copied.

1946 "An archaeological survey along the Alaska Highway, 1944" in *American Antiquity* vol. 11, 1946, 6. p. YA 1946-0007
- summary of season's archaeological activity, only mentions finding one hearth. Copied.

___ and Hugh M. Raup
1964 *Investigations in Southwest Yukon: geo-botanical and archaeological reconnaissance*. Robert S. Peabody Foundation for Archaeology, Andover, Mass.: Phillips Academy. xvii, 488 p.: ill., map; 25 cm. YA 913.031 Ro EMR FC4014.K59.J63 1964
p. 84 Reference to aspen as a "weed tree" which "comes up in abundance due to various kinds of disturbances, the most important of which over time has been fire. It is a relatively short-lived tree, and in the course of forest development following a burn it is soon replaced by the conifers."
p. 88 – "The incidence of fire in the Dezadeash and Shakwak Valleys … must be emphasized. In all our studies of soils and vegetation in the valleys proper we found evidence of fire. This was in the form of charcoal, or partially burned wood buried in the soil, or fire scars on living trees. Bits of charcoal were found in every profile of wind-deposited silts that we examined and in every organic horizon separating the lake bed silts in the lower Dezadeash basin. There can be no doubt that fire has been a major factor in the life of the valley from the beginning of occupance." Copied sections re forests and grasslands with photos and the Duke Meadow shelters.

Kepke, K., Head Fire Management, Yukon Forest Service; M. Purves, ODIT Meteorologist, Yukon Weather Centre.
1993 *Lightning in the Yukon: a climatology*. [Whitehorse, Yukon Territory: s.n.], 1993. [17 p.] : ill. EMR SD421 K46 1993

Kindle, E.D.
1949 *Dezadeash Map-Area Yukon* (report and map). Ottawa: Dept. of Mines and Resources, GSC paper 49-24. https://emrlibrary.gov.yk.ca/gsc/papers/49-24/ EMR QE185.A42 no. 49-24
An introductory section entitled "Accessibility" has interesting info re transport routes, places along the way, etc. but nothing relevant to this project. [Paper copy in KNPR files]

Klassen, W. J. and Associates
1996 *Management options for the Kluane area forests affected by the spruce bark beetle*. Prepared for the Haines Junction Spruce Bark Advisory Committee. Whitehorse: The Associates. YA 634.96 Kla 1996-01

The spruce bark beetle in the Kluane area: an information pamphlet. Prepared for Haines Junction Spruce Bark Beetle Technical Committee. Whitehorse: W.J. Klassen & Associates. 5 p.: charts. EMR SD409.5 H34 1996

Background document for the Kluane Area forests affected by the spruce bark beetle. Prepared for: The Haines Junction Spruce Bark Beetle Advisory Committee. EMR SB945.S69 H36 1996

Spruce bark beetle: severe infestation areas management options. Haines Junction Spruce Bark Beetle Technical Committee. 1 volume (various pagings): charts. EMR SB945.S69 H3 1996

Konrad Gajewski, Joan Bunbury, Mary Vetter, Nicole Kroeker and Amina H. Khan

2014 "Paleoenvironmental Studies in Southwestern Yukon," in *ARCTIC*, Vol. 67, Suppl. 1 (2014) pp. 58–70. http://Dx.Doi.Org/10.14430/Arctic4349

- brief mention of whether a more intense fire regime in early to mid Holocene period might have affected arrival of (*Picea glauca*) white spruce in area.

Kubian, Glenn

1990 *An Inventory of forest resources and forest use in the Greater Kluane Land Use Planning region*. Performed at the Yukon Land Use Planning Office. Whitehorse: Yukon Land Use Planning Commission. EMR HD319.Y8 K8 1990

-Draws on Boyd report of 1989. Re inventory of forest resources of Greater Kluane Planning Region, as part of overall planning. IDs most common tree species as white spruce, black spruce and aspen. Black spruce only common N of Kluane Lake in permafrost areas on valley floors, lodgepole pine in certain parts of southern area, occasional alpine fir at higher elevations in southern part of area.

- mentions land claim selection blocks on lake shores and valley bottoms being areas of high timber productivity.
- Forest management focusses on economic value, no mention of fire as management tool.

Kwanlin Dün First Nation

2020 *Kwanlin Dün: Dä Kwändur Chày Ghàkwadîndur, Our Story in our Words*. © Kwanlin Dün First Nation.

p. 192 – "How Indians Got Fire," by Kàdùhikh—K'ałgwach—K'odetéena—Kitty Smith (similar to Tlingit story related in Emmons, 1991: 158)

Kluane boreal forest ecosystem project; collaborative special project: annual reports.

1994- [Ottawa, Ont.]: Natural Sciences and Engineering Research Council of Canada, 1994- YA 577.37 Klu

Lantz, Trevor C. and Nancy J. Turner

2003 "Traditional phenological knowledge of Aboriginal peoples in British Columbia," *Journal of Ethnobiology*, vol.23 no.2 (2003); pp. 263-286.

"Phenology is the study of the seasonal timing of life cycle events (Rathcke and Lacey 1985) of organisms …. This paper is a preliminary effort to assess TEKW that relates to seasonality and phenology in British Columbia, Canada and surrounding regions, and to assess the significance of Traditional Phenological Knowledge (TPK) to the aboriginal peoples in this region." [no mentions of the role/use of fire]

Lawson, B.D.

1982 *Fire hazard procedures for settlement protection in the Yukon* / developed by Bruce D. Lawson; field trials in Kluane National Park. Victoria: Pacific Forest Research Centre. 21 p. EMR SD421.34.Y8 L3 1982

Leechman, J.D.

1946 "Prehistoric migration routes through the Yukon," in Canadian Historical Review, pp. 383-390. YA Pam 1946-0009

- Account of Leechman's archaeological research along Alaska Highway between Whse. and Alaska boundary.

Levy, Sharon
2005 "Rekindling Native Fires," in *Bioscience*, April 2005, Vol. 55 No. 4, pp. 303-308.
- article describes Indigenous uses of fire in California oak forest to promote acorn harvests and control weevils, growth of hazel shoots for basket weaving, burning prairie to preserve meadows, and recent work by NPS to have prescribed burns as part of land management.
p. 306 "For California Indians, the question of fire was a no-brainer. 'Our kind of people never used to plow,' a Karuk woman told the ethnologist J. P. Harrington in 1929. "All that they used to do was to burn the brush, so that some good things will grow up. They do not set the fire for nothing, it is for something they set the fire."
p. 307 "In the remote Yukon Flats region of interior Alaska, fire suppression has made it increasingly difficult for native Gwich'in people to use their traditional means of subsistence—hunting for food and trapping for furs. Before the state government cracked down on the practice in the 1950s, the Gwich'in routinely burned along creeks and wetlands to create fresh forage for moose, muskrats, and waterfowl. Now, says David Natcher, an anthropologist at the Memorial University of Newfoundland who has worked with the Dendu Gwich'in, native people are caught in a conflict between their dependence on fire-fighting jobs—the only source of paid work in this part of Alaska—and their need for flames in the boreal forest."
p. 308 Also discusses issues resulting from suppressing Aboriginal fire practices in Australia.

Lotenberg, Gail
1995 *Support Material for the Kluane Wildlife Management Database*. Unpublished report prepared for Parks Canada, Historic Sites. KNPR
Appendix E, contains various federal records including two files related to Yukon forest fires. Full citations in *Government Records* section of this report.

Lutz, Harold J.
1959 *Aboriginal Man and White Man as Historical Causes of Fires in the Boreal Forest, with Particular Reference to Alaska*. Yale School of Forestry & Environmental Studies Bulletin Series. 79. 57 p. https://elischolar.library.yale.edu/yale_fes_bulletin/79
- Useful for early accounts of newcomers writing about Indigenous People and their uses of fire. References some early accounts of perceived Indigenous carelessness with fire leading to large wildfires. Also quotes early sources of Indigenous People stating that newcomers were responsible due to their neglect campfires. Useful in citing various traditional uses of fire, appears to have been written before the time of fire being recognized as a tool in managing the boreal forest.

Mackenzie-Grieve, George
1974 *An ecological assessment of the Kathleen Lake Campground area, Kluane National Park*. 62 leaves: ill.; 29 cm. (nothing relevant) EMR QH541.15 R57 M2

Martindale, Thomas
1913 *Hunting in the Upper Yukon*. Philadelphia: George W. Jacobs & Company.
http://www.archive.org/details/huntinginupperyu00martuoft
pp. 62-63: Description of signal fires in Kluane area, 1912 (see chronological notes)
pp. 115-117: Description of moose-drive by firing fir trees to drive moose toward hunters.

pp. 201-202: Description of stalking a mountain goat. "… when in sight of the prey a fire was built to focus his attention upon the smoke and fire until I got near enough to shoot." (he missed!)

McArthur, J.J.

1917 "Notes on an Exploration through the Yukon along the base of the St. Elias Alps," reprinted from *The Journal of the Royal Astronomical Society*, Oct. 1917. YA Pam 1917-0008

- description of 1900 trip taken after work on International Boundary Survey, using horses from Jack Dalton for a pack train.

p. 321 – description of 1897 cremation of a woman from Neskataheen as related by Dalton Post trader Casey Armstrong.

p. 322 – mentions "quite a volunteer crop of hay and grasses from the seed carried in by the pack animals."

p. 325 – Re setting a signal fire for part of their group. "On the way down, at timber line, Tom fired an isolated scrubby spruce, which sent up a column of smoke and signalled our whereabouts to those at camp. In a few minutes this was answered by a similar signal. What was our surprise on looking to the southeast, to see two other smoke signals. This was the first indication of Indians in the vicinity."

McCandless, Robert G.

1985 *Yukon Wildlife: A Social History*. University of Alberta Press.

pp. 64-87: "Chapter 4, The Alaska Highway" includes useful background re impact of US Army in the area and establishment of Kluane Game Sanctuary.

p. 77 – decision by Charles LeCapelain, liaison officer between Canadian gov't. and US Army officials, to allow army engineers to burn slash along the Alaska Highway right of way, although no permits were issued and crews had no firefighting equipment.

p. 79 - Description of process by which Kluane was declared a Game Sanctuary.

McClellan, Catharine

2001 *My Old People Say: An Ethnographic Survey of Southern Yukon Territory*, vols. 1 & 2. Canadian Museum of Civilization [now Museum of Canadian History], Mercury Series, Canadian Ethnology Service, Paper 137, 2001. (previously published by National Museum of Man, 1975)

p. 78 – Some references to fire in Indigenous cosmology.

pp. 293-294 – Description of early methods of starting fires, "Fire-making Outfits", and how people transported embers in thick bark when travelling on long journeys.

1981 "Tagish" in Helm, June ed., *Handbook of North American Indians, vol. 6, Subarctic*. Washington, Smithsonian Institute.

McConnell, R.G.

1904 "The Kluane Mining District," in H. S. Bostock (ed.), *Geological Survey of Canada, Memoir 284: Yukon Territory—Selected Field Reports of the Geological Survey of Canada, 1898-1933*. Ottawa: Queen's Printer, 1957.

pp. 114-115 – Introduced with brief section on history of the discovery, transportation routes, and references to previous travels in area by W.J. Peters and A.H. Brooks of US Geological Survey, and J.J. McArthur of Dept. of Interior (for survey of International Boundary).

McIntyre, J.
1977 *Kluane National Park fire control plan: preliminary Draft*. / as reported by J. McIntyre, park warden. Includes bibliography. EMR SD421.K5 K5 1977

Monty, Jeff
1998 "Sustainable forest management in the Yukon: A new beginning" (September/October 1998, Vol. 74, No. 5, *The Forestry Chronicle*), pp. 694-696.
https://pubs.cif-ifc.org/doi/pdf/10.5558/tfc74694-5
- Summary discussion of changing forest management regime in YT, including fire management, with involvement of First Nations and pending devolution of some federal powers to territory.

Myers-Smith, Isla
2013 *Shrub encroachment in arctic and alpine tundra: patterns of expansion and ecosystem impacts*. Thesis dissertation. [not checked] LAC

Nadasdy, Paul
2003 *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon*. Vancouver, UBC Press
[no references re fire in land management but interesting analysis of impacts of creation of Kluane National Park and Reserve, and conflicts/differences in world views resulting from the scientific research/TEK dichotomy]

Nakoochee, Roberta
2018 *Reconnection with Asi Kéyi: Healing Broken Connections' Implications for Ecological Integrity in Canadian National Parks*. Thesis presented to University of Guelph in partial fulfillment of requirements for the degree of Master of Arts in Geography.
Abstract excerpt: The establishment of protected areas has long served to displace Indigenous peoples from their traditional territories, undermining Indigenous knowledge systems and the ecology of which they are a part. In the Yukon Territory, Kluane National Park recognizes Southern Tutchone 'Cultural Reintegration' as an indicator of ecological integrity. The park thus hosted Healing Broken Connections, a project managed in partnership with the Champagne and Aishihik First Nations and Kluane First Nation which sought to address 50 years of First Nation displacement from the park. . . Results indicate that Healing Broken Connections strengthened the partners' nation-to-nation relationship and began a healing process between people and land inherent to the park's management priorities but also identified key factors that need addressing in order for healing to continue.
https://atrium.lib.uoguelph.ca/xmlui/bitstream/handle/10214/14187/Nakoochee_Roberta_201809_Ma.pdf?sequence=1&isAllowed=y

Natcher, David C.
2004 "Implications of Fire Policy on Native Land Use in the Yukon Flats, Alaska," in *Human Ecology*, Vol. 32, No. 4, August 2004 (© 2004).
https://www.researchgate.net/profile/David_Natcher/publication/227160059_Implications_of_Fire_Policy_on_Native_Land_Use_in_the_Yukon_Flats_Alaska/links/5649f61508ae295f644f991a.pdf
Abstract excerpt: "Through a process of participatory mapping, this research assessed the impacts of the 1984 change in Alaska fire policy from one of exclusion to one of management on Native land use in the Yukon Flats National Wildlife Refuge. Findings suggest that while the change in policy has had little

measurable effect on community land use the continued suppression of fire on Native owned lands is having a direct impact on the current availability of wildlife resources to the point of necessitating territorial expansion among Native resource users. .... this analysis demonstrates the interaction as well as the contradiction that occur between policy, culture, and ecology as these factors together have come to influence Native land use."

Natcher, David C., Monika Calef, Orville Huntington, Sarah Trainor, Henry P. Huntington, Scott Rupp, and F. Stuart Chapin III

2019 Factors Contributing to the Cultural and Spatial Variability of Landscape Burning by Native Peoples of Interior Alaska," *Ecology and Society* **12**(1): 7. [online] URL: http://www.ecologyandsociety.org/vol12/iss1/art7/

Quote from abstract:

"The Gwich'in of the eastern Interior actively used fires to manage the landscape. The Gwich'in territory experienced a higher lightning-strike density and a corresponding increase in wildfire activity. The Gwich'in showed greater mobility in hunting moose and caribou, their less spatially predictable subsistence resources, which enabled them to avoid and or target a range of habitats affected by wildfires." [This was contrasted with different landscape and resources of Koyukon who do not use fire as a management tool.]

Natural Sciences and Engineering Research Council of Canada

1994 *Kluane boreal forest ecosystem project: collaborative special project: annual report*. Kluane boreal forest ecosystem project: collaborative special project: annual report.
YA 577.37 Klu

Nelson, Joanna L. with Erika S. Zavaleta, F. Stuart Chapin III

2008 "Boreal Fire Effects on Subsistence Resources in Alaska and Adjacent Canada," in *Ecosystems* (2008) 11: 156–171. https://link.springer.com/article/10.1007/s10021-007-9114-z

Abstract excerpt:

"We review responses of key boreal subsistence species to variation and change in post-fire stand age and other characteristics. Available data for 17 species indicate highly varied post-fire habitat requirements. Mosaics of differing stand ages generated by fire could therefore be most effective in supplying a suite of subsistence species to hunting-and-gathering communities."

Neufeld, David

c.2011 "Kluane National Park Reserve, 1923—1974: Modernity and Pluralism," in *A Century of Parks Canada, 1911-2011*. Ed. Claire Elizabeth Campbell. University of Calgary Press.

Very useful for describing the establishment of Kluane National Park Reserve in light of ongoing Indigenous claims. https://www.jstor.org/stable/j.ctv6cfrjf

Ogden, A.E. and J.L. Innes

2009 "Adapting to Climate Change in the Southwest Yukon: Locally Identified Research and Monitoring Needs to Support Decision Making on Sustainable Forest Management," in *Arctic*, vol. 62, no. 2 (June 2009), published by Arctic Institute of North America.

Abstract excerpt:

In a community-directed forest management context, research is needed that will help both the managers of forest resources in the community residence who set forest management directions to consider climate change in their decision making. Specific research needed in light of climate change to support

implementation of the forest management plan for the Champagne and Aishihik Traditional Territory, southwest Yukon, was identified through 1) sessions with local forest practitioners and 2) a community climate change workshop. Local residents highlighted the importance of formalizing a monitoring network based on local knowledge as part of a broader adaptive management framework. They also wanted an important role in any discussion on adapting Forest management plans, practices, and policies to incorporate climate change considerations. Forest practitioners expressed a need for research to identify forest management tactics that would enable them to achieve community directed forest management objectives in light of climate change. Climate change is providing the impetus and a forum for discussing a broader issue: The need for a more comprehensive research and monitoring program to support the sustainable management of forest resources.
https://www.jstor.org/stable/40513285?seq=1

O'Leary, Beth Laura
1983 "Early explorations of Nesketaheen and the Dalton Trail: an ethno-archaeological perspective." [Abuquerque, NM: Dept. of Anthropology, University of New Mexico]. 7 leaves
YA Pam 1983-0008
- Brief history of Neskataheen and the Dalton Trail based on research conducted during the Neskataheen Village Preservation and Survey Project, conducted in 1979 for CAFN.

Osgood, Cornelius
1971 *The Han Indians: a compilation of ethnographic and historical data on the Alaska-Yukon boundary area*. New Haven: Yale University, Dept. of Anthropology. [nothing useful]
YA 301 Osg

1936 *Contributions to the ethnography of the Kutchin*. Yale University Publications in Anthropology, Number 14. Human Relations Area Files Press, New Haven, Connecticut.
p. 103 "The use of smoke signals adds to our knowledge of the Kutchin [Gwich'in]. When a party splits on a hunting trip, a successful member may make a smoke signal. To do this he chooses a hill with a brushy green spruce tree on it, which he burns without cutting it down. Also a person looking for someone may do the same thing to indicate his presence."
YA 301 Osg

Oswald, E.T. with B.N. Brown, R.K. King
1981 *Vegetation of East Kluane planning area*. Victoria: Pacific Forest Research Centre. 45 leaves; 29 cm. YA 581.9 Osw [not useful]

Pyne, Stephen J.
c2007 *Awful Splendour: A Fire History of Canada*. Vancouver: UBC Press.
EMR SD421.34.C3.P95 2007
pp. 392-401 includes an administrative history of Yukon fire management.

Raup, Hugh M. and Charles S. Denny
1950 Photo interpretation of the terrain along the southern part of the Alaska Highway. US Gov't. Printing Office. Geological Survey Bulletin 963-D.
[focusses on northern BC and southeast YT. Discusses interpretation of aerial photos to ID vegetation, forest types and modification of forest after fire.]

https://pubs.er.usgs.gov/publication/b963D [also includes links to photographic plates and subsequent mapping. Interesting but not useful to this study]

1945 "Vegetation along the Alaska Highway and the North Pacific Coast," *Journal of the New York Botanical Garden* (August 1945, v. 46, n. 548, p. 177-192).
EMR QK203.Y8.R387 1945
Bound article. Some general comments re forested areas along Alaska Highway as well as some nice photos of Kluane area.
pp. 185-86: "Fires have been of widespread occurrence in both the distant and recent past—so widespread, in fact, that it is nearly impossible to find a piece of woods that has not been burned at some time or other. In general, the pine and aspen are "fire trees," and do not reproduce themselves after a single generation following fire. Their abundance and size in relation to the spruce in any given stand, therefore, are a rough guide to the recent fire history of the stand."
p. 187 – photo collage with three good images of Kluane area.

1944-1945 *Expeditions to the Alaska Military Highway, 1943-1944.* Forests and Gardens along the Alaska Highway. [New York: H. M. Raup], 1944-1945. YA 581.971 92 Raup

Reid, Crowther & Partners Limited
1982 *Kluane National Park: The Natural and Human History of Kluane National Park.*
[typescript consisting of separate reports re glaciology, mammals, fish, human history, etc. Not particularly useful for this project.] KNPR

Roburn, Shirley and Tr'ondëk Hwëch'in Heritage Dept.
2012 "Weathering Changes: Cultivating Local and Traditional Knowledge of Environmental Change in Tr'ondëk Hwëch'in Traditional Territory", in *Arctic*, 65(4), pp. 439-455.
Re partnership between Tr'ondëk Hwëch'in and academic researchers re documenting traditional knowledge in relation to climate change. No references to fire.

Rogers, Edward S. and James G.E. Smith
1981 "Environment and Culture in the Shield and Mackenzie Borderlands," in Helm, June ed. *Handbook of North American Indians: Vol. 6 Subarctic*. Washington, Smithsonian Institute.
p. 130 – "The life cycle of the forest affected its faunal composition and carrying capacity. Periodic forest fires destroyed the climax forest and initiated seral stages, each having its associated fauna. Fires disrupted the forest and game, requiring periodic movement and other adjustments by the human population."

Schwatka, Frederick
1894 *A Summer in Alaska*. St. Louis, Mo.: J. W. Henry.
[Schwatka's "popular account" of his expedition over Chilkoot Pass then down the Yukon River to its mouth in 1883. pp. 114-115: mentions use of signal fires by Indigenous guides at headwater lakes.]

Scotter, G.W.
1968 "Effects of forest fires on the lichen winter ranges of barren-ground caribou in northern Canada." Utah, Utah State University, Ph.D thesis.
Forest fires as a possible cause of caribou decline due to destruction of winter habitat. [Paterson, 1972:16]

Sewell, Ben
1994 *Management Strategies for Spruce Beetle Outbreak in Southwestern Yukon*. Whse.: Yukon College. YA 634.96 Sew 1994-11
http://kenai.fws.gov/science/ExternalReps/berg/kluanebeetle/kluanebeetle%20report4-2-2003.pdf

Sias, Mrs. J. [Josie]
1973 "A Recording of Indian History; Area: Kluane Lake to White River, Yukon Territory." 19-page typescript [appears to be missing page/s at end] KNPR-HJ library
- includes interesting material re fire building, early cooking methods, creating cooking vessels and uses of birch. See chronological notes.

Sidney, Mrs. Angela, Mrs. Kitty Smith and Mrs. Rachel Dawson
1977 *My Stories are my Wealth*. As told to Julie Cruikshank, drawings by Suzannah B. McCallum. Whitehorse, © Council for Yukon Indians.
pp. 15-16, "How Indians Got Fire," by Kitty Smith

Smith, Kitty
1982 *Nindal Kwädindür: "I'm going to tell you a story*." Recorded by Julie Cruikshank, drawings by Susan McCallum. Whitehorse: Council for Yukon Indians and Government of Yukon.
[Although Mrs. Smith tells a story of the origin of fire elsewhere, there are no fire-related stories in this story collection.]

Taylor, S. W. with K. Kepke, N. Parfitt and C. C. Ross
c1993 *Wild fire frequency in Yukon ecoregions: 1946-92*. Whitehorse, YT : s.n., 1993?. 23 p.: charts, maps; 28 cm. EMR SD421.34.Y9.T3 1993

Theberge, John B.
1976 *Bird populations in the Kluane Mountains, southwest Yukon, with special reference to vegetation and fire*. Canadian journal of zoology vol. 54, no. 8. Ottawa: National Research Council of Canada, pp. 1346-1356. YA Pam 1976-0133 [not reviewed]

1972 *Considerations for fire management in Kluane National Park*. [Ottawa: Department of Indian Affairs and Northern Development]. 38 p., ill. EMR SD421.34.K5 T5 1972
p. 1 - "If lightning caused fire is a natural event occurring in an ecosystem within a National Park, then to eliminate this force would be to create a different park, and thus violate the basic precept of national parks as stated. This error in park management has been made in most Canadian and U.S. National Parks … Not only the forest lands, but the mammalian and bird life would be completely altered if fire was excluded. Diversity would decrease, and the land lose much of its aesthetic and recreational value as a national park."
p. 2 – mentions lightning strikes less common in SW Yukon than elsewhere.
p. 5 – forested lands in KNPR amount to 780 square miles, approx. 10% of park. In Dalton Post region (Tatshenshini River Valley), of about 80 sq. mi. of forest land, approx. 50% burned recently.
p. 22 – wildlife populations altered due to fire. "Snowshoe hare, moose, arctic ground squirrels, aerial insect-eating passerine birds, buteo hawks have all benefitted from the sub-climax growths of willow, balsam poplar, aspen and herbaceous vegetation on burned areas."

– report advocates “allowing safe lightning fires to burn, allowing for some other wildfires that cannot be controlled, and prescribing enough additional controlled fires to assure the natural fire regime.”

Thompson, Arthur
1925 *Gold-seeking on the Dalton Trail*. Boston: Little, Brown and Co. YA F Tho 1925
Account of party of gold seekers travelling the Dalton Trail.
pp. 125-131 Chapter titled “The Conflagration” - Description of when the group camped near Dezadeash Lake and accidentally caused a fire when a change in wind, caused sparks from their stove to land on and burn their tent, as well as spreading to at least one nearby tree.
Pp. 208-214 Chapter titled “An Indian Cremation.” copied

Vanstone, J. W.
1974 *Athabaskan adaptations: hunters and fishermen of the subarctic forest.* Chicago, Illinois: Aldine Publishing Co. YA 572.897 Van
- While describing the environments of northern Athapaskan Peoples in some details, and that it has likely changed over time, there is little re the role of fire or human modifications to landscape.
p. 24 - “moose are most abundant in second growth birch forests that come in after fires, and along the larger rivers of interior country.”

Vuntut Gwitchin First Nation & Shirleen Smith
2009 *People of the Lakes: Stories of our Van Tat Gwich’in Elders / Googwandak Nakhwach’ànjòo Van Tat Gwich’in*. Edmonton: University of Alberta Press.
- includes Elder stories in which fire played a key role, and account of starting a fire with flint as well as early cooking methods. See chronological notes.

Weil, Gordon L.
2004 *America Answers a Sneak Attack: Alcan and Al Qaeda*. Los Angeles, The Americas Group. YA 940.532 273 Weil
p. 157 – “Another unfortunate by-product of the construction were forest fires. Inflammable materials and flame producing equipment set off blazes during construction, but the most important source were cigarettes thrown off the road into piles of slash and other combustibles. The troops seemed to think that the forest was endless and, in any case, that fire prevention was someone else’s worry. In one of the rare cases in which Canada vigorously protested the Army’s actions, the military issued tough orders to bring the blazes, some of which had been enormous, down to a more reasonable level.”

Wells, E. Hazard
1984 *Magnificence and Misery: A Firsthand Account of the 1897 Klondike Gold Rush*. Ed. Randall M. Dodd. Garden City, New York: Doubleday & Company, Inc.
Mostly re the Klondike Rush but pp. 193-195, Wells describes trip he made into interior with Glave. They separated at Lake Arkell [Kusawa Lake], with Glave and Jack Dalton headed toward Alsek. Wells and his companions Schanz and Price built a raft, crossed Kusawa L., then descended the Takhini R. to the Yukon then drifted downriver to Forty Mile.

Wong, Carmen

2017 *Status of ecological integrity in Kluane National Park and Reserve 2017: technical compendium to the State of the Park Report version 2.0*. Whitehorse; Parks Canada, Kluane National Park and Reserve. 66 pages: illustrated, graphs, photos, maps; 28 cm.
EMR FC4014.K58.C3216 2017

Workman, William B.

1978 *Prehistory of the Aishihik-Kluane area, southwest Yukon territory*. Ottawa: National Museums of Canada. WPL 641.509 Klu NC 971.91 Wor NC YA 971.91 Work 1978

- much useful information, copied several pages.

Wortley, Deb, Naomi Krogman and Debra Davidson

2001 *The Difficulties with Devolution: Community-Based Forest Management Planning in the Yukon under Comprehensive Land Claims*. Project Report 2001-28, Final Project Report.
Uses CAFN as example of input of Renewable Resource Council on various forestry matter including fire management and potential issues. Includes brief discussion on p. 21 re different governments having jurisdiction over park. May or may not be outdated. Downloaded.
https://sfmn.ualberta.ca/sfmn/wp-content/uploads/sites/83/2018/09/PR_2001-28.pdf?ver=2016-02-25-091420-633

Wright, James V.

1981 "Prehistory of the Canadian Shield", in Helm, June ed. *Handbook of North American Indians: Vol. 6 Subarctic*. Washington, Smithsonian Institute.

p. 86 - "… the enormous forest fires which still characterize the region, not only displaced all animals including man but also resulted in a sequence of plant and animal reclamation of the burnt-over area. Fires covering more than 10,000 square miles are not uncommon and people would have been forced to shift their hunting regions in accordance with the fires and their aftermath."

Wurtele, Bruce

2001 *Natural disturbance and land cover patterns in a mountainous, sub-Arctic environment*. Thesis dissertion, 2001. [not reviewed] LAC

_____ and Scott Slocombe

1996 "Landscape Pattern, Disturbance and Protected Areas: the case of Kluane region, Yukon." Presented at the Joint National Conference of the Canadian Council on Ecological Areas and the Canadian Society for Landscape Ecology and Management: Caring for Home Place: Protected Areas and Landscape Ecology. Regina, Sask.: Sept. 29-Oct. 2, 1996. KNPR-HJ

From Abstract: "The dynamics of landscape pattern and disturbances were studied in the "green belt" area of Kluane National Park, Yukon … Two natural disturbance regimes were examined in the study: spruce beetle infestation and forest fires. … The challenge for national parks is to incorporate natural landscape changes into their management and educational programmes."

"… fires in mountainous areas tend to be limited to lower elevation forests since they support greater fuel accumulation. At higher elevations, plant productivity is reduced, fuels are scarce, and hence fires are infrequent (Agee, 1993). Similarly, large homogeneous stands are more susceptible to insect infestation, whereas higher heterogeneity will decrease the spread and extent of infestations."

Yukon College, Haines Junction Campus
2007 *From First We Met to Internet: Stories from Haines Junction's first sixty-five years as a settlement, 1942-2007*. © Yukon College.
- includes story: "Bear Creek Forest Fire," by Elaine Hurlburt. [See notes in chronology.]

Yukon Historical & Museums Association (in association with Klukwan Village Council, Council for Yukon Indians, Yukon Archives and Aboriginal Language Services)
1995 *The Kohklux Map*. © Yukon Historical & Museums Association
- talks of the historic trade between coastal and interior peoples using the Chilkat Trail, in addition to the story and significance of this historic map.

Yukon Terr., Dept. of Energy Mines and Resources, Forest Management Plan
2013 *Kluane Lake East timber harvest plan: within the Beaver Creek/Burwash Landing/Destruction Bay annual allowable cut unit.* Forest Management Branch, Energy Mines and Resources, Yukon Government. EMR SD538.3 Y8 K583 2013
https://emrlibrary.gov.yk.ca/forestry/TimberHarvestPlans/approved_2013_kuane_lake_east_thp_20130403.pdf

OTHER RESOURCES

Agee, J.K.
1993 *Fire ecology of the Pacific Northwest Forests*. Washington: Island Press.
[not reviewed, cited in Wurtele et al, 1996]

Anderson, A.
1999 "Cross-cultural conflicts in fire management in northern Australia: not so black and white," in *Conservation Ecology* 3 (1):6.

Arii, Ken
1986 *Factors restricting plant growth in a boreal forest understory: a field test of the relative importance of abiotic and biotic factors.* Vancouver: University of British Columbia.
[not reviewed] YA 581.971 91 Arii

Christianson, Amy
2015 "Social science research on Indigenous wildfire management in the 21st century and future research needs," in *International Journal of Wildland Fire* 2015, 24, 190–200.
http://dx.doi.org/10.1071/WF13048
Abstract quote:
"This article reviews social science research on Indigenous wildfire management in Australia, Canada and the United States after the year 2000 and explores future research needs in the field. In these three countries, social science research exploring contemporary Indigenous wildfire management has been limited although there have been interesting findings about how Indigenous culture and knowledge influences fire management. Research with Indigenous communities may be limited not because of a lack of interest by social scientists, but rather by obstacles to doing research with Indigenous communities, such as ethical and time concerns." Includes extensive bibliography.

Eisenberg, Cristina with Christopher L. Anderson, Adam Collingwood, Robert Sissons, Christopher J. Dunn, Garrett W. Meigs, Dave E. Hibbs, Scott Murphy, Sierra Dakin Kuiper, Julian SpearChief-Morris, Leroy Little Bear, Barb Johnston and Curtis B. Edson
2019 "Out of the Ashes: Ecological Resilience to Extreme Wildfire, Prescribed Burns, and Indigenous Burning in Ecosystems," *Frontiers in Ecology and Evolution*, 26 November 2019. https://doi.org/10.3389/fevo.2019.00436
Abstract excerpt:
"Incorporating TEK in adaptive co-management can help create ecosystems more resilient to fire and pervasive stressors such as invasive plants, provided one contextualizes current conditions and how they differ from historical conditions."
Quote from Introduction:
"Indigenous fire management had measurable effects (e.g., keeping prairies open by burning woody vegetation; Pollard, 1910; Roos et al., 2018). As Indigenous Peoples' populations declined due to disease and colonization, their fire-management impacts on plant communities changed (Liebmann et al., 2016)."

Favrholdt, Ken
2004 "Fire History in BC's Interior," in *BC Grasslands*, October 2004, pp. 4-5.

Gottesfeld, Leslie M. Johnson
1994 "Aboriginal Burning for Vegetation Management in Northwest British Columbia," in *Human Ecology*, Vol. 22, No. 2, 1994
Abstract excerpt:
"Gitksan and Wet'suwet'en peoples of northwest British Columbia occupy the upper drainage of the Skeena River and the western headwaters of the Fraser River. … Berry patch burning was the most important traditional vegetation manipulation. Black huckleberry and lowbush blueberry patches were burned to stimulate growth of new stems and production of berries, while preventing invasion by other shrub species and conifers. Maintenance of berry patches by burning was discontinued in the 1930s and 1940s because of fire suppression by the British Columbia Forest Service. Spring burning on south facing slopes, village sites, and garden sites was also practiced, and continues to the present."

Huffman, M. R.
2013 "The many elements of traditional fire knowledge: synthesis, classification, and aids to cross-cultural problem solving in fire-dependent systems around the world" in *Ecology and Society*, *18*(4).
Quoting Sutherland review: "Mary Huffman hypothesizes that there are a set of common elements informing traditional fire knowledge (TFK). She identifies 69 distinct elements of TFK based on the analysis of 25 studies occurring in 27 countries. Of the identified elements, the twelve most common include: fire effects on vegetation; season of the year, fire effect on animals; moisture of live or dead fuels; the onset or end of rainy seasons, dry season, or timing of rain; burning illegal or regulated by central government; fire intensity, heat output, ie., hot or cool fire; frequency, return interval, time since fire; fire control; firebreaks, barriers; consequences of not burning; and plant or animal phenology. Of the studies reviewed by the author, only three make reference to Canadian case studies."

Janzen, Sidney Stephen
1990 *The Burning North: a History of Fire and Fire Protection in the Northwest Territories*. A thesis prepared for University of Alberta, reprinted by Government of Northwest Territories.

Kimmerer, Robin Wall
2013 *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*. Minneapolis, Minnesota: Milkweed Editions.
[from book promo: "As a botanist, Robin Wall Kimmerer asks questions of nature with the tools of science. As a member of the Citizen Potawatomi Nation, she embraces indigenous teachings that consider plants and animals to be our oldest teachers." Helpful in discussing fire from a First Nation perspective.]

Kimmerer, Robin Wall and Frank Kanawha Lake
2001 "The Role of Indigenous Burning in Land Management," *Journal of Forestry*, Volume 99, Issue 11, November 2001, pp. 36–41. https://academic.oup.com/jof/article-abstract/99/11/36/4614303
Abstract excerpt: "This article highlights the findings of the literature on aboriginal fire from the human- and the land-centered disciplines, and suggests that the traditional knowledge of indigenous peoples be incorporated into plans for reintroducing fire to the nation's forests."
From a bibliographic review: "Their article contributes importantly to the existing fire literature by underlining the key role culture plays in fire regimes worldwide and how landscapes themselves may serve as important archives of fire knowledge and practice." (Sutherland, 2020: 3)
[includes extensive list of sources.]

Lake, Frank K. and Amy Cardinal Christianson
2019 Indigenous Fire Stewardship," in S. L. Manzello (ed.), *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*. https://doi.org/10.1007/978-3-319-51727-8_225-1
Examples include "Canada/Western Provinces" including many specific references to B.C. Indigenous Nations.

Lake, Frank K. with Vita Wright, Penelope Morgan, Mary McFadzen, Dave McWethy, and Camille Stevens-Rumann
2017 "Returning Fire to the Land: Celebrating Traditional Knowledge and Fire," in Journal of Forestry, Sept. 2017. https://www.fs.fed.us/psw/publications/lake/psw_2017_lake001.pdf
Abstract excerpt:
> "North American tribes have traditional knowledge about fire effects on ecosystems, habitats, and resources. For millennia, tribes have used fire to promote valued resources. Sharing our collective understanding of fire, derived from traditional and western knowledge systems, can benefit landscapes and people. We organized two workshops to investigate how traditional and western knowledge can be used to enhance wildland fire and fuels management and research. … A key conclusion from the workshops is that successful management of wildland fire and fuels requires collaborative partnerships that share traditional and western fire knowledge through culturally sensitive consultation, coordination, and communication for building trust. We present a framework for developing these partnerships based on workshop discussions."

Lantz, Trevor C. and Nancy J. Turner
2003 "Traditional phenological knowledge of Aboriginal peoples in British Columbia," *Journal of Ethnobiology*, vol.23 no.2 (2003); pp. 263-286.
"Phenology is the study of the seasonal timing of life cycle events (Rathcke and Lacey 1985) of organisms …. This paper is a preliminary effort to assess TEKW that relates to seasonality and phenology

in British Columbia, Canada and surrounding regions, and to assess the significance of Traditional Phenological Knowledge (TPK) to the aboriginal peoples in this region."
[no mentions of the role/use of fire]

Lewis, H.T., and Ferguson, T.A.
1988 "Yards, corridors and mosaics: how to burn a boreal forest," in *Human Ecology* 16(1): 57–77. https://link.springer.com/article/10.1007/BF01262026
Abstract: Ethnographic studies have established that, until shortly after World War II, Indians in northern Alberta regularly and systematically fired habitats to influence the local distribution and relative abundance of plant and animal resources. In ways similar to what has been reported for hunter-gatherers in other regions, this pyrotechnology contributed to an overall fire mosaic that, in this case, formerly characterized northern boreal forests. Crosscultural comparisons of these practices with those in other parts of North America, as well as in several parts of Australia, illustrate functionally parallel strategies in the ways that hunter- gatherers employed habitat fires, specifically in the maintenance of "fire yards" and "fire corridors" in widely separated and different kinds of biological zones.

Lewis, Henry T.
1978 "Traditional Uses of Fire by Indians in Northern Alberta", in *Current Anthropology*, Volume 19, Number 2, University of Chicago Press Jnls. [Research conclusions] https://www.journals.uchicago.edu/doi/10.1086/202098
p. 401 … anthropologists have [with few exceptions] ignored the variety of ways in which hunters and gatherers have used fire both to modify and maintain local environments. The reasons for this neglect can largely be summed up in terms of three general factors: (1) our own cultural traditions, involving a much outdated view of how fire affects environments; (2) evolutionary assumptions which stress the point that foragers do not exert control over the amount and diversity of natural resources; and (3) an ecological-anthropological perspective that deals with the ways in which environments influence human behaviour, virtually never the obverse." ….

"Indian burning practices were effectively eliminated with the enactment and enforcement of federal and provincial fire regulations beginning more than 60 years ago. … only a relatively few, older individuals in the most isolated portions of Alberta's boreal forest, who have any firsthand knowledge of traditional burning."

Lutz, Harold J.
1959 *Aboriginal Man and White Man as Historical Causes of Fires in the Boreal Forest, with Particular Reference to Alaska*. Yale School of Forestry & Environmental Studies Bulletin Series. 79. 57 p. https://elischolar.library.yale.edu/yale_fes_bulletin/79
- Useful for early accounts of newcomers writing about Indigenous People and their uses of fire. References some early accounts of perceived Indigenous carelessness with fire leading to large wildfires. Also quotes early sources of Indigenous People stating that newcomers were responsible due to their neglect campfires. Useful in citing various traditional uses of fire, appears to have been written before the time of fire being recognized as a tool in managing the boreal forest.

McCune, Jenny L. and Marlow G. Pellatt, Mark Vellend
2013 "Multidisciplinary synthesis of long-term human–ecosystem interactions: A perspective from the Garry oak ecosystem of British Columbia," in *Biological Conservation*, vol. 166, Oct. 2013, pp. 293-300.
https://www.sciencedirect.com/science/article/abs/pii/S0006320713002784?via%3Dihub

- Study of the rare and small Garry Oak ecosystem of S. British Columbia "… the current dominance of exotic species is not due to competitive superiority, but a result of habitat fragmentation and changes in herbivory and disturbance regimes since European settlement. Historical and ethnographic research point to the purposeful and regular use of fire by the Coast Salish peoples of this region, and land survey records indicate that Garry oak has not always been the prime savannah tree species. Paleoecological studies document the maintenance of open savannah habitat in the late Holocene despite cooler, wetter climatic conditions that favour coniferous forests, suggesting a very long history of indigenous management."

Michel, H. & T. Allison.
2004 "Helping our land heal – A cultural perspective on fire and forest restoration." in Finding common ground: The role of fire in managing healthy grasslands, *BC Grasslands* October 2004:7. https://bcgrasslands.org/wp-content/uploads/2018/10/2004-fall_bcgrasslands.pdf (Accessed Feb. 16, 2021).

Miller, Andrew M. with Iain J. Davidson-Hunt, and Paddy Peters
2010 "Talking about fire: Pikangikum First Nation elders guiding fire management," in *Canadian Journal of Forest Resources* 40: 2290–2301 (2010).
"Patience. Patience. They are just lighting the match to light the fire in their mind. They have this knowledge." [Paddy Peters, remarking on Elders' consideration of key findings summarizing research on the potential role of fire in Whitefeather Forest Planning Area]
Abstract excerpt: "In this paper, we present how elders of Pikangikum First Nation in northwestern Ontario have drawn upon their knowledge and values associated with fire to engage in fire management planning for 1.3 million hectares of their traditional boreal forest territory."

Miller, A.M., and I. Davidson-Hunt
2010 "Fire, agency and scale in the creation of aboriginal cultural landscapes," in *Human Ecology* 38 (3): pp. 401–414. https://doi:10.1007/s10745-010-93253 (*note: link doesn't work)

Nikolakis, William D. and Emma Roberts
2020 "Indigenous fire management: a conceptual model from literature," *Ecology and Society* 25 (4):11. 21 p. featuring extensive bibliography. https://doi.org/10.5751/ES-11945-250411
- described as an analysis of scientific and scholarly literature to better understand Indigenous fire management.

Pyne, Stephen J. with Patricia L. Andrews and Richard D. Laven
1996 *Introduction to Wildland Fire*. New York, John Wiley and Sons, Inc.
EMR SD421 P94 1996
A more general history of fire and fire management. pp. 657-666 discusses the Canadian national fire programs using Ontario and Alberta as examples. "Aboriginal Fire" is briefly discussed on pp. 610-612, with global examples of anthropogenic burning. The "Boreal Biota" is briefly discussed pp. 632-633 but nothing re Indigenous concerns or participation in potential management programs.

Ray, Lily A, with Crystal A. Kolden, E. Stuart Chapin III.
2012 "A Case for Developing Place-Based Fire Management Strategies from Traditional Ecological Knowledge," *Ecology and Society* 17(3): 37. http://dx.doi.org/10.5751/ES-05070-170337

Simmons, E.
2012 "British Columbia's Indigenous People: The Burning Issue", *Journal of Ecosystems and Management* 13(2):1–2. Published by FORREX Forum for Research and Extension in Natural Resources. http://jem.forrex.org/index.php/jem/article/viewFile/200/466
- Summarizes a few studies re Indigenous fire practices of Syilx people in the Okanagan area, the Dene people of Fort Nelson First Nation and general studies re fire management. Cited articles have been listed in this report.

Stockdale, Christopher A. with Neal Mcloughlin, Mike Flannigan, and S. Ellen Macdonald
2019 "Could restoration of a landscape to a pre-European historical vegetation condition reduce burn probability?" in *Ecosphere*, Vol. 10 (2), Feb. 2019, Article e0252584. www.esajournals.org
- Abstract excerpt: The authors "used historical oblique photographs of an area in the Rocky Mountains of Alberta, Canada, to determine the vegetation composition in 1909 and then asked whether restoration to a historical vegetation condition would: (1) reduce the overall burn probability of fire; (2) reduce the probability of high-intensity fires; and (3) change the spatial pattern of burn probabilities, as compared to current conditions. We used the Burn-P3 model to calculate the overall and high-intensity burn probabilities in two scenarios: (1) the baseline (current (2014) vegetation composition) and (2) historical restoration (vegetation in the study area as of 1909 with the surrounding landscape in its current condition). In the baseline, the landscape had 50% less grassland and more coniferous forest than 100 yr ago. … The historical restoration scenario reduced the overall burn probability by only 1.3%, but the probability of high-intensity wildfires was reduced by nearly half (44.2%), as compared to the baseline scenario."

Sutherland, Colin R.
2020 *Pyrogeography in Context: Encountering Wildland Fire in Canadian National Parks*. PhD dissertation submitted to York University, University of Toronto, Sept. 2020. http://parkscanadahistory.com/publications/sutherland-2020.pdf
Abstract excerpt: Through a multi-sited institutional analysis of Parks Canada, this research explores the complex relationship between conservation, fire management, and the maintenance of value in Canadian national parks. In this study I position Parks Canada within the context of Canadian settler colonialism and Canadian national parks as an ongoing component of the relationship between settlers and Canadian territory. I analyze how fire management has developed and is enacted in Canadian national parks and pay particular attention to the practice of prescribed burning as an alternative to full suppression.
[Many references to Indigenous Peoples and fire. Although Kluane National Park was one of his study sites, nothing specific re findings at KNPR.]

Wallenius, Tuomo with H. Juho Pennanen, and Philip J. Burton
2011 "Long-term decreasing trend in forest fires in northwestern Canada," in *Ecosphere*, May 2011, Volume 2(5), Article 53.
- Summary of a study in boreal forests in northwest Canada, concluding there is a trend to a drop in forest fire occurrence with average area burned decreasing from 2.0% in the first half of the 19th century to 0.33% in the later half of the 20th century. "Earlier interpretations that humans dominated the causes of forest fires in the past, even in sparsely populated regions, deserve further attention as a possible explanation for the decreasing trend in fires."

Watson, Alan E. with Stephen Carver, Christopher Armatas, William T. Borrie, Jonny Huck, Brooke B. McBride, Fernando Sanchez-Trigueros, Linda Moon Stumpff, Tyron Venn

n.d. "Traditional phenological knowledge: Literature review and case study descriptions of cultural resilience in fire adapted ecosystems by tribal college faculty in the southern Rockies." [not reviewed]

White, Clifford A., Daniel D.B. Perrakis, Victor G. Kafka, and Timothy Ennis

2011 "Burning at the edge: integrating biophysical and eco-cultural Fire processes in Canada's parks and protected areas." *Fire Ecology*, Volume 7, Issue 1, 2011. doi: 10.4996/fireecology.0701074

Abstract excerpt:

"Key lessons learned by practitioners restoring fire to landscapes include: 1) fire is only one process in ecosystems that also include other complex interactions, and thus restoration of fire alone could have unintended consequences in some ecosystems; 2) recognizing long-term human roles of not only fire managers, but also hunters and gatherers is critical in restoration programs; and 3) this diversity of past, present, and future ecological and cultural interactions with fire can link managers to a broad constituency of stakeholders. … a necessary pre-requisite to successful fire management at the edge." [No northern examples.]

Wynecoop, Monique D. with Penelope Morgan, Eva K. Strand and Fernando Sanchez Trigueros

2019 "Getting back to fire sumés: exploring a multi-disciplinary approach to incorporating traditional knowledge into fuels treatments," *Fire Ecology*, (2019) 15:17. https://doi.org/10.1186/s42408-019-0030-3

Study of 30 plot pairs that were treated or untreated prior to burning by North Star Fire and one growing season post fire in Traditional Territory of Confederated Colville Tribal Council. (US, Washington state)
Abstract excerpt: "Together, the results suggest that prior thinning and prescribed burning can foster vegetation response to subsequent wildfires, including culturally important plants. Further, integrating Traditional Knowledge (TK) into fuels treatments can improve ongoing adaptive management of national forests that include tribal ancestral lands."

Sound and Video Recordings

Bud and Jeanne (Connolly) Harbottle fonds

[ca. 1898] - 1977

15 Super 8 films (2009/87) were created by Bud and Jeanne Harbottle. Film subjects include Kusawa Lake, Whitehorse, Carcross, Haines Road, Kluane National Park, Skagway Road, Canol Road, Annie Lake, airplanes, Snow Birds air show, Alaska Highway, Yukon Sourdough Rendezvous, Atlin, gold mining, Dempster Highway, moose hunting, canoeing, and a couple of Santa Cruz, California trips, 1974-1977.

The above is in-process material may not be available to researchers.

Bill Thompson fonds

Video V-080-3 and Film 8-13-8 (79/125) Film 8, ca. 1949. Video V-080-4 and Film 8-13-10 (79/125) Film 10, ca. 1949. Note: Car trip along Kluane Lake. Detailed listing sheets are available.

Websites

Canada. Aboriginal Affairs and Northern Affairs Library Catalogue
https://virtua.aadnc-aandc.gc.ca/scripts/dojo/dojo/splash/index.html

Canada. Crown Indigenous Relations and Northern Affairs Canada. FAQs – Yukon Devolution
https://www.rcaanc-cirnac.gc.ca/eng/1352471189145/1537369386562

Alaska's Digital Archives
https://vilda.alaska.edu/

- Digital database for 16 Alaskan libraries, archives and museums. Very few items for Kluane region, most to do with Alaska Highway construction.

Canada. Parks Canada: Kluane National Park and Reserve.
https://www.pc.gc.ca/en/pn-np/yt/kluane

Canada. Kluane National Park and Reserve, First Nation Harvesting Rights.
https://www.pc.gc.ca/en/pn-np/yt/kluane/activ/tradition/i#fnhr.

Library and Archives Canada
https://collectionscanada.gc.ca/

Newspapers.com
https://www.newspapers.com/

Yukon Archives
https://yukon.ca/archives

Yukon Archives Library catalogue
https://virtua.gov.yk.ca:8443/search/query?theme=archives

Yukon. Energy, Mines and Resources Library Catalogue
https://virtua.gov.yk.ca:8443/search/query?theme=emr

Yukon Nuggets
"The Fires of '58" A CKRW Yukon Nugget by Les McLaughlin. Also includes an audio file.
https://yukonnuggets.com/stories/the-fires-of-58
[Good summary of the 1958 fires in Southern Yukon by author who was a young Whse. resident at the time.]

Yukon Public Libraries catalogue
https://www.pac.gov.yk.ca/#section=home

II. CHRONOLOGY

Date	Event (Source)
c. 1700s	Longstanding trade relationship between Chilkat Tlingit from southeast coast of Alaska and Tutchone people in the interior of what is now Yukon Territory. When Russian traders arrived on the coast, the Chilkat acted as intermediaries between newcomers and interior people, trading Euro-American goods for furs, hides, copper and other goods.
ca. 1850 or "possibly much earlier"	Evidence that Duke Meadows regularly used by Indigenous People. "The ruins of temporary camps are everywhere. … Brush camps or 'open top camps', can be found literally by the hundreds in favourable areas such as along Talbot Creek. The right bank for about a mile from the mouth has been a camping area and ruins of all ages are found on the valley floor and on the bordering hillside. (Cruikshank, 1974: V-20; Johnson and Raup, 1964: 184)
1867	US purchase of the territory of Alaska. Subsequently American traders and military personnel travelled to SE Alaska.
1869	American scientist, George Davidson, in Klukwan to view a total solar eclipse on August 7, 1869. Chief Kohklux invited to Sitka to make arrangements for the scientific party's visit. Despite ill treatment from General Davis, Kohklux made Davidson and his party welcome. He agreed to provide Davidson with a map from Klukwan to Fort Selkirk and return. Eventually, he and his two wives made a much larger more detailed map. At their dictation, Davidson wrote the names for over 100 rivers, lakes, glaciers, mountains and villages on the map. This map traverses the traditional territories of several First Nations and contains valuable linguistic and geographic information in addition to its historic significance. (YHMA, 1995)
1873	American trader Arthur Harper travelled into the western area of region by way of the White River. He was seeking native copper, after an Indigenous man had shown him a sample at Fort Selkirk, but was unsuccessful in this quest.
1882	Geographer Arthur Krause was the first recorded non-Indigenous person to enter the interior via the Chilkat Trail guided by two Indigenous men. He mapped the route from Pyramid Harbour to Tatshenshini River. His maps and reports were a valuable resource to those who came later.
1890	- E. J. Glave and Jack Dalton travel on an expedition over the Chilkat Pass sponsored by *Frank Leslie's Illustrated Newspaper* of New York. They travel down Kusawa Lake, travelled across Frederick Lake (named after Glave's late brother), to Lake Klukshu south of Dezadeash. From native settlement at Klukshu travelled 35 miles to Neskataheen. Here they hired an Indigenous guide and descended the Tatshenshini River to Dry Bay on the coast. (Wright, pp. 228-34.) - They had entered the country with E. Hazard Wells and a few others. At Lake Arkell [Kusawa Lake], Wells, Alfred B. Schanz, Frank Price, and a Chilkat man referred to as

	"Schwatka" built a raft, crossed the lake, descended the Takhini R. to the Yukon, then floated down the Yukon to Forty Mile.
1891	- Glave and Dalton returned for further travel in the area with packhorses. Hired two Chilkat guides and an interpreter to take them from Klukwan to Neskataheen. Wished to go farther into the interior but were unable to hire guides: "They dared not go to the White River which we wished to reach; the Indians of that region being always on the warpath. In former days the latter had made raids on this settlement and killed off the natives; in fact the present small population of about a hundred at Neska-ta-heen was attributed to fights with the *Yookey Donner* people dwelling on the banks of the White River." (quoted in Wright, p. 234) - Glave and Dalton met two men from Hutshi Lake who guided them to the Kaskawalsh to meet with their families at their hunting camp and then from there to Kluane Lake. At this point the two men were running out of supplies and returned to the coast.
1891	- Frederick Schwatka, accompanied by C. W. Hayes, leads an expedition to cross St. Elias Mountains by following the White River to its source. Party travelled overland from Selkirk, going southwest heading for Alaskan coast. - according to Hayes, the party "probably saw most of the natives inhabiting the White River basin they only numbered altogether between fifty and sixty people. The first party, consisting of six families, was camped on the Nisling, making a fish trap in anticipation of arrival of the salmon, which was anxiously looked for. These Indians are closely related to those living on the Pelly. They are similar in appearance and mode of life and apparently speak the same language." (Hayes, 1892: p. 122) - on the Kluantu (Kluane) River, they meet another party of First Nations people "most of whom had never seen a white man." Party obtains a number of rafts from these people to descend the river about 14 miles to its confluence with the Donjek. (Hayes, p. 123) [Numerous mentions of timber fires, as well as seeing and using signal fires, all flagged in Index.]
1895-96	Jack Dalton set up a trading post near Neskataheen in direct competition with the Chilkat trade and began improving the route, cutting trail and building bridges.
1898-99	Klondike Gold Rush. A number of stampeders travel to the goldfields via the Dalton Trail, a toll road/trail following a traditional Chilkat trading route. Jack Dalton had set up a toll road along the trail and charged gold seekers.
1898	NWMP detachment set up at Dalton Post. Insp. Jarvis estimated about 100 Indigenous People near Neskataheen and another 150 at village near Dalton Post. p. 99 – Describes trail surveyed and laid out by Jack Dalton the previous July for which he was charging a toll of $2 per capita on all cattle and $2.50 on horses. "I did not stop Mr. Dalton from building his trail on up to the Summit but warned him that he could not exact toll on the Canadian side."

	p. 104 – "The Canadian Stick Indians make their headquarters at Dalton House, and I should judge would number, all told, about 150 souls. They earn their living by fishing, trapping and packing, $4 per diem being about the usual tariff in this district by Indians." - mention that one mile west of post is a "cremation village." Describes funeral of "one of the oldest chiefs" and ceremonies. p. 105 – "I am told that during the last couple of years, the fur has been driven off by the many bush fires that have been started by careless campers." NWMP Annual Report, Appendix H. Annual Report of Inspector A. M. Jarvis
1903	- Dawson Charlie and Skookum Jim, two discoverers of the original Klondike claims, find gold at Fourth of July Creek. Prospectors stampede to the area out of Whitehorse and by the end of the year, 2000 claims were recorded. Wagon road constructed from Whitehorse to Silver City (aka Kluane) largely following a traditional Indigenous travel route. -establishment of Burwash Landing by the Jacquot Brothers, named after mining recorder, L. T. Burwash, following year. 1903-04, several NWMP detachments set up in area; all but three closed following year, remainder located at Champagne, Pine Creek, and Silver Creek.
1904	- NWMP followed the miners and in 1904 set up temporary detachments at Champagne Landing, Pine Creek, Kloo Lake, Bullion Creek, Ruby Creek and Silver City at Silver Creek at the southeast end of Kluane Lake. - territorial government builds a wagon road between Whitehorse and Kluane, following a traditional trail. - Louis and Gene Jacquot built a trading post at Burwash Landing to service people of White and Donjek River country. - at first, native people used post as one of their summer stops and camped by lake first in brush shelters and later in tents. The Jacquot brothers built cabins for regular visitors and soon First Nations people began building their own cabins. -const. of wagon road from Mendenhall Landing to Silver City.
1905	Police reports estimate 8-10,000 people in the Kluane area.
1907	- start of international boundary survey from Yukon River south to Scottie Creek. The boundary survey continued until 1913. During summer of 1913, mention of thick pall of smoke from area forest fires and good descriptions of the largely-unprepared stampeders heading for the Chisana diggings. (Green, 1982: 144-175).
1913	- Chisana gold rush to headwaters of Chisana River in Alaska. - Many of the routes to the new diggings went through White River country. Police posts were established on at Donjek, at the mouth of Snag Creek, at Boundary (on Beaver Creek near the international border) and at Kluahne (Silver City) to monitor prospectors on the trail, as well as help handle customs. The posts closed the next year when the rush ended. (RNWMP Annual Reports, 1913, 1914)

	- Geologist D. D. Cairnes noted the small settlements that sprang up. On Dec. 1, there were about 50 cabins at the mouth of the Donjek River, 250 at the mouth of Snag Creek, and about 500 bldgs. at Chisana City. The Yukon Government had built: a wagon road from Coffee Creek to Canyon City, a 20-mile trail along left limit Donjek River to Beaver Creek, and a 45-mile trail from mouth of Snag River SW to Beaver Creek again to international boundary line. (Cairnes, 1914: 21) - there were nine roadhouses between mouth of White River and International Boundary. (Cairnes map, 1914) During summer of 1913, mention of thick pall of smoke from area forest fires and good descriptions of the largely-unprepared stampeders heading for the Chisana diggings. (Green, 1982: 144-175).
1914	Jan. – according to YT Commissioner George Black, "1200 men were distributed along the White River route between the mouth of the White river and the Boundary line." (Cairnes, 1915: 25)
1929	The last fire event to burn more than 2 square km (200 ha) occurred in 1929 near Kloo Lake and this was the only event found to be historically referenced. Glover (1929), while on a routine RCMP patrol from Champagne to Kluane Lake, noted "A forest fire was burning in the vicinity of Kloo Lake and considerable timber had fallen across the government road which had to be removed". [Francis, 1996: 30]
1942	April-November: U.S. Army builds Alaska Highway tote trail between Dawson Creek and Fairbanks, AK. Federal official gives permission for US Army engineers to burn their slash, notwithstanding lack of fire permits or any fire-fighting equipment. [McCandless, 1985: 77] July 23, Territorial Council approved amendment to Game Ordinance authorizing Commissioner to issue resident hunting licenses at one dollar each to US Army personnel. This led to many accusations of over-hunting, wastage, and disrespect of animals.
1942/43	– "Another unfortunate by-product of the construction were forest fires. Inflammable materials and flame producing equipment set off blazes during construction, but the most important source were cigarettes thrown off the road into piles of slash and other combustibles. The troops seemed to think that the forest was endless and, in any case, that fire prevention was someone else's worry. In one of the rare cases in which Canada vigorously protested the Army's actions, the military issued tough orders to bring the blazes, some of which had been enormous, down to a more reasonable level." [Weil, 2004: 157]
1942/43	- Civilian contractors of the PRA (Public Roads Administration) build the more permanent road, replacing the military tote trail.
1942/43	1951 Nov. 14 – C.K. LeCapelain, Chief Lands Division to G.E.B. Sinclair "When I arrived in the Yukon Territory in June 1942, I found that no effort was being made or had ever been made on forest fire protection in the Territory. There was no staff and no

	funds provided for this work. Anything that could be done would have to be done under Ordinance which left the responsibility to the R.C.M.P. My first effort concerning forest fire suppression was to enlist the co-operation of the American Army, the American Public Roads Administration, who had about 15,000 employees on their staff engaged on road construction, and the Department of Transport, who were engaged in airport construction. We got fine co-operation from these agencies." - LeCapelain went on to give a summary of early firefighting efforts with a very small budget. Stressed importance of fire detection, "It is no good having an elaborate fire suppression system unless you first have a first class fire detection system …" (LAC, RG 85, Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.)
1943	- Largely in response to increase in hunting during Alaska Highway construction, Yukon Council declared Kluane area a game sanctuary, closed to all hunting, trapping and fishing, a ban that excluded Indigenous Peoples from large parts of their traditional territory. This was a 10,000 sq. mi. area SW of highway from White River to Alsek and Dezadeash Rivers. Mining activity continued however.
1943	1951 Nov. 14 – C.K. LeCapelain, Chief Lands Division to G. E. B. Sinclair, Director Northern Administration and Lands Branch "At this time timber sales and permits along the Alaska Highway, which had expanded tremendously, were in a chaotic condition in the office of the Mining Recorder, who at the same time was Dominion Lands Agent, Territorial Agent, Territorial Liquor Agent, Secretary of the School Board and Secretary of the Office Board. It was absolutely impossible for him to attend to all his duties and there is simply no reflection on him when I state that the timber sales were in a chaotic condition. Consequently Mr. Jackson spent most of his time on these timber sales although both of us continued our effort in enlisting the constant co-operation of the Americans and the Department of Transport." (LAC, RG 85, Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.)
1944	Federal employee F.H.R. Jackson" [full name not provided] spent the summer making a forest inventory of the timber resources of Southern Yukon Territory. (LAC, RG 85, Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.)
Late 1940s	First documented report of spruce beetle activity in the Yukon, approximately 39,000 ha of spruce forest around Dezadeash Lake was affected. (*Yukon State of Environment Report*, 1996: 95)
1951	7 Nov. 1951, H.L. Holman, Forest Liaison Officer to G. E. B. Sinclair, Director Northern Administration and Lands Branch "… the sad truth is that the present organization cannot furnish adequate protection during the kind of seasons we have had in 1948, 1950 and 1951. As it is unlikely that the current cycle of bad fire years will be reversed after only four or five years, we may expect more such

	years, possibly not in 1952, but certainly within the period 1952 to 1960, and should take steps at once to improve the degree of protection being given." (LAC, RG 85, Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.)
1952	1952 Feb. 2, Memo re Forest Fire Protection, Y.T. -mentions there being a much higher incidence of fires in the Whse. area than elsewhere in Y.T. "This is partly due to greater population density; that it is the most arid region and subject to Chinook winds." Later details fire expenditures and locations in 1951, two of which were in Champagne area and Dezadeash Lake. (LAC, RG 85, Vol. 1394, file 440-4, pt. 1 – correspondence related to Yukon forest fire protection, 1951-1952.)
1952	- trapline registration came into force with boundaries set by Yukon government and many rules that contradicted traditional land use practices. (McCandless, 1985:137-148)
1952	In report detailing forest fires costs, numbers of 1952 fires classified by cause: Campfires – 7 Smokers – 3 Lightning – 3 Industrial Operations – 1 Unknown – 8 Total fires = 23 Refers to increased traffic on Alaska Highway and any increase in campgrounds and lunch stops, "beyond ability of present staff in even a moderately severe fire year." "Above average precipitation and relative humidity in all but the Kluane district combined with generally lower than average temperatures throughout the Southern Yukon made this a very light fire season." Listing of fires: Fire #5 – Reported June 3rd: Class B Location: Mile 966 Alaska Highway Reported by Indians to settler at Champagne. Brought under control by settler and local Indians. Extinguished by Whse. warden and Indians using power pumps. Believed caused by smoker. Cost: Wages $39.20 Fire #7 – Reported June 7th: Class B Location: Kloo Lake … Brought under control by Warden and local Indians. Cost to date: wages $32.00 Fire #69 – West side Little Arm, Kluane Lake. Cause: camp fire left by hunters.

	Action taken: CNT discovered fire 1300 Sept. 17, telephoned Forestry Division, Whitehorse and Kluane. No action was taken on this fire. Damage: 60 acres of spruce 40 to 50 yrs. 150 acres of muskeg or barren. … Remarks: This fire smouldered for some time at timber line. (LAC, RG 85, Vol. 1498, file 441-1-1, pt. 2 – Yukon forest fire reports, 1951-53.)
1953	From list of YT Forest Fires, July 15 to August 10, 1953, compiled by D.J. Learmouth, Forest Engineer. Fire #47 – July 28th, 1953, Kluane District – Large West of Mile 1206, Alaska Highway. This fire started on Alaska side of border and was fought by Alaska fire crew. It was not controlled and spread across the border into the Yukon Territory on a large front. Warden Langevin is aiding a sawmill operator, (Whitehorse Lumber Co.) to protect his mill-site which is in the path of this fire. The fire itself is too large to be fought. No direct expenditure to date. Fire #49 – July 31st, 1953, Kluane District – 500 acres. 61 miles north of Snag Airport Road. Considered uneconomical to fight. (LAC, RG 85, Vol. 1498, file 441-1-1, pt. 2 – Yukon forest fire reports, 1951-53.)
1950s	DIAND Forest Resources responsible for forest fire management. Describes zoning of YT into *Fire Action* or *Fire Observation* zones.
1958	- Devastating forest fires in Southern Yukon. Fire began 10 Mile area on Dawson Rd., ascribed to RCAF detonating unexploded bombs near Lake Laberge. Joined by huge wildfires at Mendenhall, Fox Creek and Carmacks on N. Klondike Hwy., south near Teslin and at Squanga Lake. - Forest specialists were flown in from national parks across Canada. - Early July, Laberge fire joined up with fires burning at Mendenhall and Stony Creek. - July 17, Whitehorse Mayor Gordon Cameron declared a state of emergency and ordered all Whitehorse residents to pack their belongings and be prepared either to drive to Carcross or to take the train. Town was saved by onset of cooler weather and rain. [McLaughlin, n.d.] WS, 1958-07-24: “Area burned by the combination of the Stoney Creek, Mendenhall and Laberge fires extends from Mile 968 south to Mile 930 and from the Ibex River Valley to Mile 25 on the Mayo Highway. … “Not able to relax yet are about 60 CNT linemen who have been working along the highway repairing lines. “With 100 poles burned off south of Whitehorse and another 60 or more north of here, the men have kept 24 hour shifts to maintain communications. …. “Not assessed are Indian homes and traplines burned out. According to local Indian affairs representatives there are at least 12 native families affected and many more will turn up later after fishing season is over.”

Ca. mid 1960s	"Unfortunately, fire burned all fire records prior to 1964, when the warehouse of the Yukon Forest Service burned down." [Theberge, 1972: 2]
1970	Germal Construction Co. Ltd. Built a firebreak around the community of Haines Jct. [McIntyre, 1977: 14]
1972	Kluane National Park Reserve set aside in 1972 to become a national park.
1974	The following amendment was included in *An Act to Amend the National Parks Act*: (3) Any land so set aside as a national park shall not in any manner prejudice any right, title or interest of the people of native Indian origin of the Yukon should such a right, title or interest be eventually established.
1976	Establishment of Kluane National Park Reserve protecting 21 980 km2 of Canada's Northern Coastal Mountains Natural Region. Kluane abuts three other large protected areas: Wrangell-St. Elias and Glacier Bay National Parks in Alaska and British Columbia's Tatshenshini-Alsek Park. [Note: Park became known as Kluane National Park and Reserve after signing if CAFN final agreement.]
1979	Three key issues and challenges in implementing KNPR fire policy: -Whether plan should distinguish between lightning and human-caused fires; or follow model of wanted or unwanted fires. -Decisions re desirable vegetation complex to perpetuate in KNPR. -once vegetation complex selected, develop long range goal of avg. area to be burned per year. (Hawkes, 1983: ii)
1979	Protesting their long exclusion from a key part of their traditional territory, Indigenous People began sending hunting parties into the game sanctuary area north of the current Park boundary. According to Kluane First Nation Elder Mary Easterson, this was sparked by "the territorial government's refusal to allow children from the Kluane Tribal School to learn traditional methods of hunting and trapping in the sanctuary." WS, 1979 May 30.
1979	The bi-national Kluane-Wrangell-St. Elias-Glacier Bay-Tatshenshini-Alsek park system comprising Kluane, Wrangell-St Elias, Glacier Bay and Tatshenshini-Alsek parks, was declared a UNESCO World Heritage Site.
1980	Fires at Canyon Creek outside KNPR and near Brooks Arm of Kluane Lake.
1963-1981	Yukon Lands and Forest Service records confirm there were no lightning caused fires in KNPR from 1963-1981. Data from Alaska suggests that lightning caused fires probably occurred in KNPR every 20 to 50 years. During same period, 8 human-caused fires, mainly due to recreational activity, burned less than .5 ha in total. (Hawkes, 1983: ii)
1983	Yukon Court of Appeal ruled that the Yukon Government could not restrict Indigenous hunting in game sanctuaries. Later that year, this decision was upheld by the Supreme Court of Canada, which refused to hear a YG appeal. WS, 1983: June 30, Nov. 25.

1983	Memorandum of Understanding that the Yukon Forest Service (Dept. of Indian and Northern Affairs) to deal with all major fires within KNPR. As of 1987, the Park itself was equipped with "minimal hand operated equipment." [Env. Canada, 1987: iv]
1986	Yukon portion of Alsek River proclaimed a Canadian Heritage River.
1987	Yukon Land Use Planning Agreement among federal gov't., territorial gov't. and CYI to provide for establishing Regional Planning Commissions charged with directing preparation of land use plans in selected areas of the Yukon. (Kubian, 1990: 3)
1988	Commencement of planning process for the Greater Kluane Planning Region, the first such region in Yukon. Work included inventory of forest resources. (Kubian, 1990: 3)
Early 1990s	Spruce bark beetles began to infest the Kluane area, killing mature spruce trees in a patchy manner throughout the Shakwak Trench. "Our working hypothesis is that the boreal forest community is never in equilibrium because of disturbances caused by fire and bark beetle outbreaks, and we need long-term data to follow these changes." Yukon ecological monitoring protocols (2007 edition) http://www.aina.ucalgary.ca/scripts/mwimain.dll/379/2/2/63869?RECORD&DATABASE=KLRS
1993	When agreement was reached with the Champagne and Aishihik First Nations [CAFN] over an eastern portion of the Reserve, that part—about 5,900 square kilometres (2,300 square miles)—became a national park in 1993, and is a unit of the national park system administered co-operatively with Parks Canada.
1994	Outbreak of spruce beetle, covering an estimated 34,000 ha of spruce forest in SW Yukon. (*Yukon State of Environment Report*, 1996: 95)
1995	Establishment of the Kluane National Park and Reserve Management Board, an advisory body that makes recommendations to the Minister of the Environment and Climate Change, Canada, Parks Canada, CAFN and Kluane First Nation [KFN]. The latter joined the board in 2003 after ratifying their final agreement.
1996	The study area [Shakwak Trench] is currently "fire-free" and has not experienced a major wildfire for over 40 years. A spruce beetle *(Dendroctonus rufipennis* Kirby) outbreak is affecting large areas of the Shakwak Trench near Kluane Lake and southern portions of Kluane National Park Reserve (Klassen 1996). The area affected by this single insect outbreak is orders of magnitude larger than any single wildfire event in the recent past. Harvest plans for beetle-damaged timber are being considered by Yukon Forest Resources, Northern Affairs Program (Northern Affairs Program 1994). (Francis, 1996: 23)
1998	Major fire started May 30 at Bear Creek. It was an extremely dry summer and fire burned until mid August. "By that time another one had erupted on the back of Paint Mountain at the end of Pine Lake."

	"According to officials, the beetle-kill spruce forest (the fire site) causes unique problems. It is a fine fuel with fine twiglets, dry root systems, and much deadfall. The fire crowns very easily, and there is a lot of spotting happening." [E. Hurlburt in YC, 2007: 81-82]
2001	Signing of the Yukon Northern Affairs Program Devolution Transfer Agreement, providing for transfer of responsibilities for lands, water, forestry and mineral resources [including wildfire management) from the Government of Canada to the Government of Yukon in 2003. https://www.rcaanc-cirnac.gc.ca/eng/1352471189145/1537369386562
2003	Signing of the Kluane First Nation Final Agreement. The northern of the park reserve will retain park reserve status until the White River First Nation concludes a final agreement.
2004-2009	Parks Canada worked with Champagne and Aishihik First Nations and Kluane First Nation on the initiative *Healing Broken Connections* to help reintegrate First Nations into the portions of their traditional territories that now lie within Kluane National Park and Reserve.
2020	Parks Canada, CAFN and KFN commenced a collaborative project - *Dákeyi ukaanathị̀ jè: All of you watch over our country with your heart – Restoring forest ecosystems in Kluane National Park and Reserve* – with an interest in both informing a long-term approach to restoring and increasing the resilience of Kluane forests, while helping to revitalize Southern Tutchone traditions and culture.

APPENDIX: Chronological Notes

These are more detailed notes from a few of the sources consulted during this work.

Arrival of Euro-Americans

Glave, Edward J.
2013 *Travels to the Alseck: Edward Glave's reports from southwest Yukon and southeast Alaska, 1890-91*. Edited by Julie Cruikshank, Doug Hitch and John Ritter. Whitehorse: Yukon Native Language Centre.

1890

p. 98: re using fire for mosquito control
"All the Alaskan forests seem to have suffered greatly from fire, caused no doubt to a great extent by burning camp-fires left by Indian hunters and trappers; a part of these conflagrations, however, must be credited to the custom the Indians have of firing the dry grass to keep the mosquitoes away. These pests attack a man as soon as he sits down, so the Indian fires the grass just around him, and creates atmospheric conditions detrimental to the invading insect. With this barrier between himself and his foe, he rests until the destroying element warns him to move on. Old Koona Ack Saï and his family always practiced this, but I am undecided which was worse, the mosquito or the stifling preventative. These forest fires scare all the animals away, and account to some extent for the scarcity of game in this country."

p. 123 – reference to earlier "primitive method of obtaining fire by the rubbing together of dried wood,"

p. 124 – description of cremation of dead.

1891

p. 253 – Glave describes Indigenous guide, Nanchay, using fire for signalling:
"He said his wife had moved camp from where he had left her, and really he did not know where she was. He began an incessant signaling by burning trees, and by and by the keen eyes of Tsook spied a faint curl of smoke creeping up from the wooded brow of a hill about ten miles away, which told of the whereabout of the missing family."

1891, p. 282 – reference to evidence of a much larger population of Indigenous Peoples:
"For some strange reason the numbers of the Gunena people are rapidly decreasing. Actually, there are only two settlements—NeskaTaHeen and Hootchy-Eye. At these two places there are permanent dwellings, but nowhere else throughout the territory of the Sticks … There are not more than 300 all told of the people occupying the land between Chilkat River on the East, the Copper River on the West, the Yukon in the North and the Coast Range on the South. There must have been many more people in former days. There are signs of a great deal of work being done in the woods in former days. Whole forests of timber have been felled for fuel, it being cut several feet from the ground, showing that it was cut in the winter when the snow was deep."
[Note: Drop in population was likely due to epidemics of diseases that came inland with Tlingit traders who contracted them from Euro-American traders.]

1891, p. 283 – importance of forests in seasonal travels:
"The natives say they cannot live in the village when the stormy weather arrives. Instead of gathering in a winter stock of fuel and building strong weather-proof houses, they prefer to trek away into the forests and avail themselves of the shelter of the dense timber lands. All make a beeline for the woods upon the approach of the storm and the valley becomes totally deserted. They say it is quite warm in the forests and there they have an unlimited supply of wood."

Harris, Arland S. 1996 *Schwatka's Last Search: The New York Ledger Expedition through Unknown Alaska and British America, including the journal of Charles Willard Hayes, 1891*. Fairbanks, University of Alaska Press.
Two accounts by Frederick Schwatka and geologist Willard Hayes of their trip travelling from Juneau up Taku R. to Teslin Lake, down Teslin and Yukon Rivers to Fort Selkirk then on to headwaters of White River, the Skolai Pass and upper Chitina drainage.
[Numerous mentions of timber fires, as well as seeing and using signal fires, all flagged in Index.]

The Klondike Stampede, 1897-99

Canada. North-West Mounted Police Annual Report
1898 Report of Superintendent S. B. Steele: p. 20, "Forest Fires"
"Tremendous fires have, during this past summer, raged throughout the Yukon Territory and Northern British Columbia.
"From the time the rush of boats to Dawson commenced from Bennett, through the carelessness and wilful neglect of individuals, nearly every mile of timber on the Yukon River was in flames. Notices has been previously posted by Mr. Willison, Crown Timber Agent, who took a trip down the river for the purpose of looking after the interests of his department. I had people warned at every station where boats were forced to land, however, nothing would have prevented the destruction of the timber, but the patrolling of the river with fast launches, arresting the perpetrators and instructing the people how to place their campfires.
"That a great many of these fires were caused by ignorance is evident from the fact that after having been directed to do so, the great majority placed their camp fires on the beach and extinguished them with water.
"All the detachments have strict orders on the subject of forest fires and printed notices have been placed at every conspicuous point."

1898 Annual Report of Superintendent Z. T. Wood. NWMP, Tagish, p. 41 – "Indians"
"At and around Dalton's Post, there are about one hundred (100) Indians of the Stick Tribe. They appear to be more intelligent and industrious than those about here, some of them work as packers and guides and earn about $4 a day. They dress like the whites and are not likely to require government support. Fish forms their principal article of food.
"They cremate their dead and each family has its own fishing and hunting grounds, which are handed down from generation to generation.
"A Stick Indian, Doc Scottie, is employed by us as a dog driver and interpreter."

Appendix H. Annual Report of Inspector A. M. Jarvis (re Dalton Trail Post)
p. 99 – Describes trail surveyed and laid out by Jack Dalton the previous July for which he was charging a toll of $2 per capita on all cattle and $2.50 on horses. "I did not stop Mr. Dalton from

building his trail on up to the Summit but warned him that he could not exact toll on the Canadian side."

p. 104 – "The Canadian Stick Indians make their headquarters at Dalton House, and I should judge would number, all told, about 150 souls. They earn their living by fishing, trapping and packing, $4 per diem being about the usual tariff in this district by Indians."

- mention that one mile west of post is a "cremation village." Describes funeral of "one of the oldest chiefs" and ceremonies.

p. 105 – "I am told that during the last couple of years, the fur has been driven off by the many bush fires that have been started by careless campers."

1981 "Tagish" in Helm, June ed., *Handbook of North American Indians, vol. 6, Subarctic*. Washington, Smithsonian Institute.

p. 481 – Discussing animal populations in C/TFN Traditional Territory

"Since 1900 the caribou population has declined markedly, so that only a few small herds live in the high coastal range. None has been seen at Carcross since the 1920s … However, moose have increased greatly, perhaps because of the increase in forest fires following the Klondike stampede."

Graham, Angus

c1935 *The Golden Grindstone*: *the adventures of George M. Mitchell*. Philadelphia: J.B. Lippincott.

The adventures of George M. Mitchell and party en route to Klondike via Mackenzie River then following HBCo. trade route into Yukon. During this expedition, Mitchell split his knee cap with an ax, but his knee was mended due to very effective surgery by two Gwich'in women. He then arranged to spend the much of winter with this party of Gwich'in people in order to heal. He learned a little of their language and recorded several interesting observations about their lives.

pp. 217-218 "Fire making is a bloody art with those Indians … the result of generations of work, I suppose. If an Indian wants to make a cup of tea or roast something, he will make a very small fire that throws a tremendous heat with next to no smoke. He chops his sticks, we'll say, ten or twelve inches long, and splits them small: then he piles them lengthwise on top of one another—parallel you understand, not criss-cross—and then he lights them from the top. I asked Colin about this once and explained that white men always lighted fires from underneath. Colin said that was the wrong way to light fires, they should be lighted from the top; but when I asked him how he did it he couldn't explain at all—he just did it that way and that's all he knew about it. When I pressed him he reminded me of the difference between the work of a man and a beaver—when a man wants to put a stick upright in the mud he has to get an axe and hammer in the stick, and then it doesn't stay, while the beaver quietly swims up with the stick in his mouth and sticks it in, and it does stay. Well, we can't make fires in the Indians way any more than we can put sticks in the mud in the beavers' way, so that's all there is to it.

"They make big fires with larger logs, for parties of eight or ten men, in just the same way, laying the logs lengthwise. They're most expert at finding dry twigs, and they know how to split dry wood out of the inside of dead branches even if they're soaking wet on the outside. As I've told you, their fires for cooking outdoors are pretty free of smoke, but if they want a signal fire they can make it smoke right up to Heaven and can make the column of smoke veer to the north or south, or however they want, by fanning it with a coat, or a blanket. They never leave a fire burning by any chance—you won't find any burned land up in that valley anywhere. And now we're talking about fires I want to tell you one of the oddest things … When they want to say in their language 'you make a little fire' they say '*Kunatcha*', and when they want to say we two will make a little fire,' they say '*Quanatchi*', but when they want to say 'everyone make a big fire', they say '*Ignaz'*."

p. 283 - Mitchell briefly described smoky fires in shelters then spoke more about outside fires.
"I never lost my admiration of the way they'd put a few sticks together and get a brilliant hot, *hot* blaze, and have a duck or muskrat roasting before you had time to turn around. … I really think, … that the explanation is that they knew just where to put the fire to get the proper draught. And they'd get the fire going just the same—incredibly quickly—even in heavy rain when everything was soaking; in that case I think they did it by splitting their logs so as to expose only the dry centre to the flame, and the same with kindling wood."

Big Game Hunting & Outfitting

1912

Martindale, Thomas
1913 *Hunting in the Upper Yukon*. Philadelphia: George W. Jacobs & Company.
http://www.archive.org/details/huntinginupperyu00martuoft

Description of signal fires in Kluane area, 1912:
pp. 62-63: "Early this morning we saw a great volume of dense smoke on the very top of a mountain covered with timber, and near the foot of the same elevation another "big smoke" was in sight. The two fires were said to be signals to their squaws that they had killed a moose; or, to be exact, the top fire was to signal them to come—both they and the children—as a moose had been killed; the lower one was built close to the dead animal, so as to lead them directly to the carcass."
Description of using fire to drive moose toward hunters:
p. 116 - "There were many fir trees standing by themselves whose lower branches were dead, and these when touched with a match would burn and quickly snap almost like fire crackers. The flames would then rapidly shoot to the tops of the trees, making a brilliant fire accompanied by a dense smoke. There was no danger of a forest fire, as the trees that were fired were always old trees and for the most part dead at the bottom, and they nearly always stood alone. The crackling of the lower branches could be heard from afar, and the scent of the burning wood would soon be caught by the sensitive nostrils of any moose that might be in the vicinity. Each man was to watch out so that the tree that was fired should be on a line as nearly as possible with his companion's tree. Thus they slowly worked their way towards our rendezvous. We soon could see from afar the pillars of smoke ascending to the sky, but it was some time before we saw the fire.
p. 117 "We had been assigned a suitable position about three-eighths of a mile away, and all was silent for a time until the sound of three shots rang out to our left. After that the Chief and I heard nothing more, neither did we see game of any kind. The horsemen having now appeared, that settled the drive for the day. The Chief said that the wind had turned just enough to drive the moose across the river, rather than straight down to us."

1914

Auer, Harry. *Campfires in the Yukon*. Whitefish, Montana: Kessinger Publishing. [Originally published Cincinnati: Stewart & Kidd, 1917] WPL 799.29712 Aue NC
- Description of Harry Auer's experiences hunting big game in SE Yukon in 1914.
pp. 132-136: Detailed description of attempt to hunt moose by driving them between two rows of flaming trees. Includes a useful diagram as well as Auer's analysis of why the hunt was unsuccessful. (copied)

1940s

"The Andover-Harvard Yukon expeditions of Frederick Johnson (R.S. Peabody Foundation) and Hugh Raup (Harvard University) to southwest Yukon in 1943, 1944 and 1948 represented the first systematic explorations of Yukon's prehistoric past." [See detailed notes below.]

1948

Harp, Elmer Jr.
2005 *North to the Yukon Territory via The Alcan Highway in 1948: Field Notes of the Andover-Harvard Expedition*. Yukon, Tourism and Culture, Occasional Papers in Archaeology No. 14.
https://emrlibrary.gov.yk.ca/Tourism/occasional%20papers%20in%20yukon%20archaeology/north-to-yukon-territory-via-alcan-highway-andover-harvard.pdf

9 June 1948, p. 10
Wed. 9 June 48 – Spotted 2 forest fires in aft; one S down the road around Champagne; the other N of us somewhere over the Bear Pass & E of road.

Sat. 12 June 48 – Very hot day & the mosquitoes out like blazes. Went to 85° in the shade & a blue smoke haze from the forest fires hung all thru the valley.

p. 14 – colour pic, "Forest fire at Champagne"

Fri. 18 June 48 - Went up on esker [poss. near Champagne] to view the fire which looks very bad & raging across a front of perhaps 8 miles; has already passed over mts. to N side; huge convection clouds formed over it. Hiked back thru post & down to river.

p. 24 – colour pic, "Camp #2 (near Whisker Crk.) - Indians around fire, roasting sheep quarter"

p. 25 – colour pic, "Close-up of roasting sheep quarter" (Roast on propped up stick in front of fire)
pp. 27-29
"Sat. 10 July 48 Clear day, smoke haze gone, extremely hot. Fred & I left at 8 AM with Moose for a hike up Henry Crk. to look at a pole tipi lodge that Moose had noticed while tracking a moose 6 yrs ago. Simply amazing the way he led us thru the muskeg flat for about 1½ mi then branched off to the left at just the right point & climbed 100' or so up steep ridge & brot us to the exact spot–after 6 yrs! I marked particularly his flat-footed rolling, typically bush Indian gait that took him tirelessly thru the rough muskeg. The Camp he brot us to had unfortunately been burned down since he was last there, & Moose was mighty regretful about that, for he had hoped to show us really something. Every few minutes he'd mutter, "I wonder who burned down this place?". The camp was a circular tipi made of cut spruce poles & probably covered with moss–about 14' in diam. The deep depression in the moss was still visible as well as many butts of the collapsed & burned poles around the perimeter. …
"We excavated around the edges (the center was all destroyed) & found buried about 18" deep under accumulated moss, a broken skin scraper made of shaly rock (not chipped or retouched inn any way & measuring about 2 ½" x 8"); a dozen or so rolls of birchbark which had been cut with a sharp (metal?) knife & cached, as Moose said, for fire kindling; . . . .
"This camp in a peculiar place, so high on the steep slope of the ridge surrounded by deep spruce forest, but Moose explained it as a winter camp put the
re because of good supply of firewood; snow used for water. Up the hill about 100' above he showed us

the remains of a deadfall for foxes or lynx, & said it probably belonged to the camp below. The whole setup formerly enclosed by brush, for disguise, except entrance."
down cache, & one open brush shelter (cf. K=6-23 [slide]) made of piled up spruce trees (3 or 4 to a side) & open on the front for fire; this just a wind break & about 6' square."

pp. 39-40
"Later in the aft. sat out under a big spruce with Moose, George, Fred & Dickie roasting moose ribs before a 6' long open fire on the bank of the creek, the meat spitted on a sharpened stick. Took 2 hrs. to roast this chunk big enuf for all, & it was elegant! They give it a quick sear on both sides, then back it off for slow roasting. Moose then stripped down the outer bark of a spruce & we all ate some of the paper thin strips of the inner bark–mild & piquant; something like palm tree hearts. The Indians eat this inner bark (cambium layer) every July when it is sweet & tender & before it turns into wood. They say that poplar bark is even better–then we recalled the stripped poplar trees we saw around Paul's wife's tent after she came down to our camp at Pine Crk. We didn't know then!"

p. 41, Thurs. 15 July 48
"Then a delightful experience, stopping & having a meal Indian fashion: as we came down to the creek Jimmie & Sam just looked for a good place to halt where everything was handy; we dismounted on a gravel flood beach & Jimmie immediately lighted a fire under the stump end of a large dead spruce that had been cast up by the waters; then he went over to the edge of the cutbank where a few poplars grew on the outside of the spruce woods & cut 2 long poplar staves. Sam had the tea pot heating in the fire when Jimmie came back & stuck a side of moose ribs up before the blaze & a string of steak on another stave; then they cut a pile of poplar branches & spread them over the gravel as a sort of table cloth. When the meat was roasted we sat around, each with a piece of steak & a rib, cutting off chunks with a hunting knife; also tea, good strong bush tea, & some cinnamon rolls obtained from Paul. That's the way to eat meat, all right!
… As usual, when we were finished & ready to move on, the fire was left burning: the Indians have no regard for fire & I have never seen them put one out (except for one instance in camp when it might have spread thru the duff overnight & got to some of the tents & pack train equipment); I suppose most of the campfires they leave continue to smoulder down in the duff for a long time; some may peter out in time; but others undoubtedly give rise to forest fires of some consequence [eg.?] the Kloo Lake & Champagne blazes? I guess this doesn't bother them–there's plenty of country & plenty of bush!"

p. 42, Thurs. 15 July 48
"These brush camps (as distinct from the poles used to setup recent tents–which may be either a combination of 2 crutches & ridge, or 4 shears & ridge) are of 2 kinds, as mentioned before: 1 – The open-top brush camp: These are winter nomadic camps & are virtually little more than wind-breaks & fire reflectors. 2 – The tepee-tree brush shelter: … These also occur in groups, & most of them seem large enuf to hold only 1 or 2 persons sitting or crouched. Moose called them summer shelters. Sam says either summer or winter.

p. 47, Sat. 17 July 48
This is an old Indian camping ground here on the W bank about ½ mi. from the head of the lake. Many cuttings visible altho an old burn (probably from a camp fire) has obliterated most of the old signs. One large high log cache collapsed. Moose showed us an open-top brush camp which he made under a large spruce in the winter of 1946 & slept when the temperature was 50° below zero. He said it got a little cold that night after the fire went out. Decided to stay here at Boulder Crk. at least one day.

p. 52, Wed. 21 July 48
"Forgotten from yesterday–Moose's story of the sweatbath: Sam has had a cold for several days & so the discussion turned into that vein while we were excavating the rectangular tepees. Fred told how he treated such an affair by sweating it out with hot whiskey etc, & then Moose came in with his version: the Indians make a little canvas tent (tepee?), then they put in a few big rocks that have been heated in a fire; then 2-3 people get in & close the canvas up tight & pour water on the hot rocks. The steam gets so thick, he said, you can scarcely breathe. This is a therapeutic sweat bath … "

p. 53 – colour photo: "Signal fire from Little Arm to Burwash"

pp. 54-55, Sat. 24 July 48
"Reached site of Camp-1 by 11:45 & kept right on going on the last leg to the outlet of the Kluane R. About 12:30 PM we rounded a point in the Little Arm & could see Burwash perhaps 10 miles away. The Indians decided to put up a smoke signal to let them know we were coming, so they built 3 fires 100 ft. apart. While Jimmie was dragging in logs for the center fire, Moose got a great stump going on one end, & Sam calmly piled in some brush at the base of a 50 ft. spruce & before we knew it the whole tree was a thunderous blaze. I'll never forget that signal! Amazing the way these Indians treat fire–they just don't give a damn. When we left, Sam's spruce was still burning around the base & nobody seemed to mind the clump of 3 other big ones that stood right next to it."

p. 85, Thur. 19 Aug 48
"Albert Isaac is the chief of the Aishihik lake group of Indians, & every summer he comes across & sets up a hunting camp near the base of the Big Arm, on the N shore. His trail comes across through the head of Raft Crk. & he travels down the Big Arm above timberline so he doesn't have to fight the bush. He had a string of about 10 excellent looking horses & 3 colts grazing around camp when we came in. He has 4 canvas tents set up there in a wide draw, one of them surrounded by an artificial wind break of cut poplars. The sled dogs were all tied up on the low ridge behind the tents.
"This camp is probably more exposed than the usual bush Indian camp, but it is apparently placed so that signal fires can easily be seen over at Burwash when they want the boat to come over with supplies."

p. 95, Friday 27 August 48
"could pan for gold anywhere in the Big Arm, from Gladstone to Raft creek–I suppose he meant in the streams coming down from the mts, or else in the sands at the base of the outwash gravels. (That, according to Gene Jacquot, is theoretically the place to find the gold – at the base of the gravels, & he tells about how the early prospectors used to dig down into these gravels: when they came to permafrost they built fires to thaw out a few inches at a time; & when the shafts were so deep that fires wouldn't draw in them, they heated up rocks & tossed them in to speed the thawing. He once saw some miners expose a sheep skull 35 ft. deep in such gravels.) Cf. other notes on Albert Isaac & early traders to Aishihik."

pp. 101-102, Wednesday 1 Sept.48
"went up to Mrs. Jimmie's with Fred to watch her & get some pictures of her making baskets. She operates with an awl that tapers back from round into a rectangular x-section, & handles it the same way as in sewing moccasins: the awl is punched thru & momentarily left in the hole while she grasps the pointed end of spruce root (or sinew), between thumb & index-finger; then she grips awl between 2nd & 3rd fingers, pulls it out, & while still holding it thus, quickly inserts the spruce rt. into the hole before it has a chance to close, the bead running around the rim of the basket is a green willow shoot. When she

comes to the end of a section of root she places an end to be laced under the next 3-4 loops; the new section is knotted before being placed thru its first hole. The split & coiled roots are kept submerged in a pan of water. The best time to cut bark is in the spring when the sap is rising; it can also be cut at the end of the growing season as "winter bark", which Fred says is used for canoe building in the E. Mary Jacquot says that bark can be cut in wintertime by building a brush fire encircling the base of the tree; then when the trunk has warmed up the bark can be stripped quickly before cooling sets in."

1958 Fire

Champagne & Aishihik First Nations and Sha-Tan Tours

1988 *From Trail to Highway – Kwädāy kwätän ts'än ck'àn tän kwàtsin: A guide to the places and people along the Whitehorse, Yukon to Haines, Alaska corridor*. © CAFN

p. 18 – section titled "Fire."

For the boreal forest, this huge "burn"—the result of a fire which swept through here in 1958—is both natural and needed. A fire (kwan) creates an entirely habitat for the animals and plants that return to the area. The fireweed or Ts'äk'än Gyù—"weed that grows after a burn"—is one of the first plants to return. Birds and insects also return quickly, while the pollen and plant seeds are blown into the area resulting in new growth. The poplar that can be seen here thrive in recent burn areas. And these leafy new plants and trees are "haute cuisine" for browsing animals like moose and elk. What seems to be a destructive process is extremely important in maintaining a healthy moose population. For the Indians too, even in the wake of disaster, fire can mean the beginning of new hunting and trapping opportunities.

"A forest, particularly one this far north, is slow to regenerate. Although over 30 years have passed since the fire, there is still ample evidence of its impact."