

# SAVING THE WORLD THAT COYOTE MADE

*The Climate Crisis & Native People  
of the Northern Rockies*



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# SAVING THE WORLD THAT COYOTE MADE

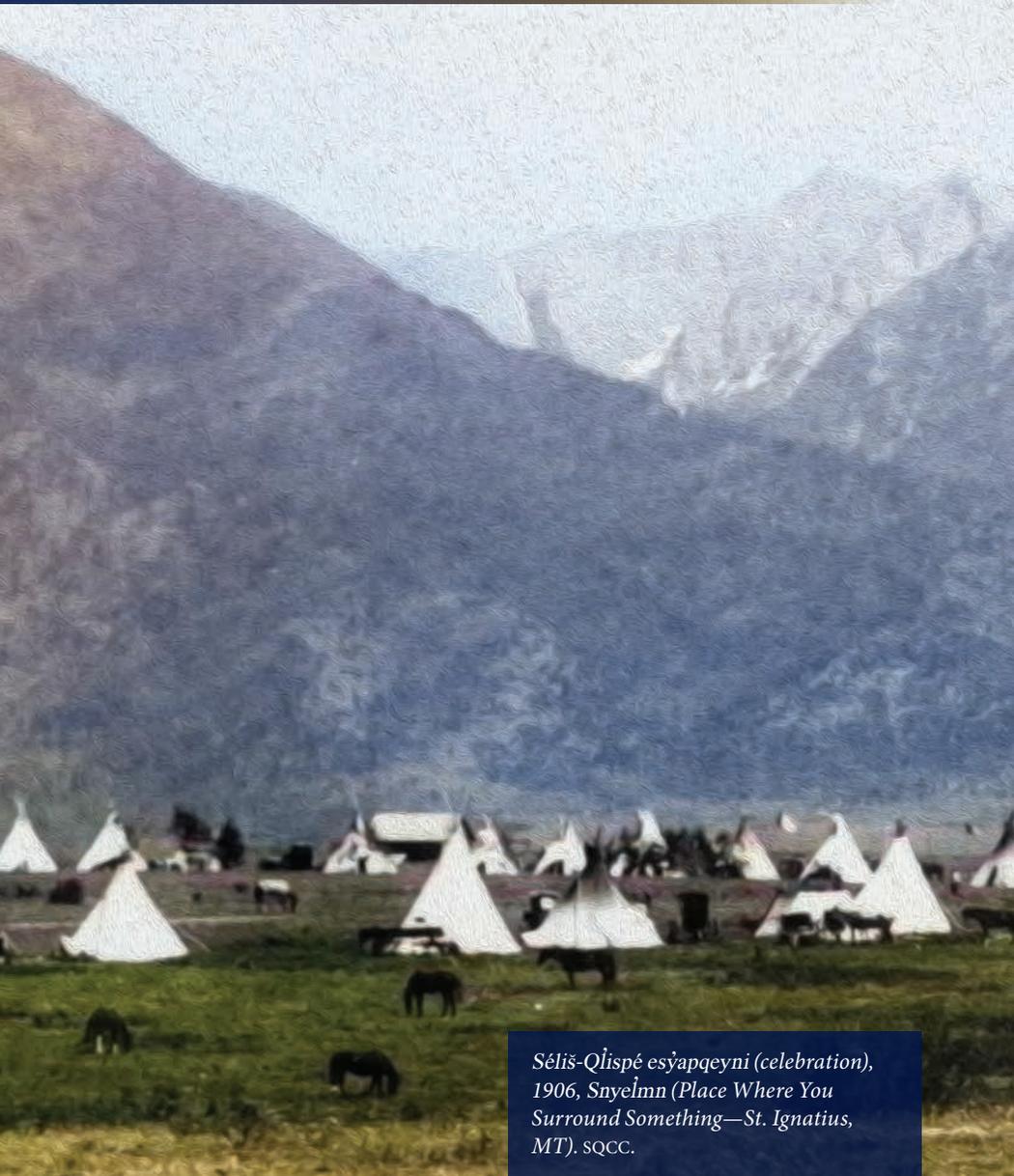
## *The Climate Crisis & Native People of the Northern Rockies*

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## PART 1

# *The Covenant of Reciprocity*



*Séliš-Qlispé esʔapqeyni (celebration), 1906, Snyelmn (Place Where You Surround Something—St. Ignatius, MT). SQCC.*

**S**éliš elder Agnes Vanderburg often told us, “Sometimes the truth hurts.”

Yet she always taught us to learn what the truth is, in order to walk into an uncertain future with our eyes wide open. Only then can we find a better path forward.

So we begin by facing facts. There is no longer any valid question that the earth’s climate is warming and becoming less stable. We are in danger of destroying the seasons we and all human ancestors have always known—the patterns of temperature, rainfall, and snow that make possible our very existence, and the existence of the plants and animals with whom we share the planet. The causes of the climate crisis are deeply embedded in every aspect of our society and economy, and it is already well underway.<sup>1</sup> It has so much momentum behind it that slowing it down or reducing its severity—let alone stopping or reversing it—will challenge all of us in ways that are unprecedented in human history.

As we search for a way out of this deepening crisis, most of our attention is focused on the development of new technologies that we hope will solve the problems caused by slightly older technologies. Certainly, better conservation to reduce energy consumption, rapid conversion to



*Agnes Vanderburg (Séliš, 1901-1989). SQCC.*

“clean” energy sources, and more efficient, safer batteries will have to be part of the solution. But we also need to listen to a very different source of guidance and direction, something that comes not from the cutting edge of scientific innovation, but from the oldest roots of human wisdom. We need to listen to the elders.

In their stories and in their teachings, we find hope for our capacity as human beings to take care of our only home. We find hope even for a challenge as

daunting as the climate crisis. The elders remind us of what has brought us to this point in our history, and what we must do to address it: return to a path of respect for the world around us—for our fellow human beings, and also for the lands and waters and air, the plants and animals, whose fates are intertwined with our own.

In traditional ways of life, people in Indigenous communities had to be close and keen observers of the natural world. As Nancy Turner and tribal elder Helen Clifton (Gitga'at — Coast Tsimshian) stated, it is a special kind of “close observation, made year after year, by people who depend on their knowledge of the weather and environment for their survival.”<sup>2</sup> As Turner and Clifton note, “People with such deep experience recognize anomalies readily.”<sup>3</sup> Indigenous people have come to understand not only how foods and medicines fluctuate across the seasons, but also how they have fluctuated across the years and decades and even centuries, from “millennia of intergenerational ecological observation.”<sup>4</sup> They have come to know even the long climatic cycles of temperature and precipitation.

Indeed, some of the most powerful stories of climate change, in all the far-reaching human dimensions of this unfolding catastrophe, come from the native peoples of the Americas. In recent



*Helen Clifton (Gitga'at), c. 2014.*  
Photo by Jenny Uechi, courtesy National Observer.

years, tribal elders from across the western hemisphere have been telling us that the world they have known for millennia is now being transformed, with ever-increasing speed.

Here in the Northern Rockies, Q̓lispé elder John Peter Paul (1909-2001) noted that the month of February is named for a figure from tribal creation stories named Čq̓osqn (Curley-headed). In some of these stories, the spirits and animal-people decide the nature of the world that will be inhabited by human beings. Mr. Paul related how Čq̓osqn said that in that world-yet-to-come, he would govern the coldest part of winter: “I’ll be so tough I’ll freeze the babies in the womb!” When Mr. Paul was growing up, he remembered the snow piling up four or five feet, and the weather sitting at 40 below zero for a whole week, true to what was set forth in the creation stories. “But now it’s all changed,” Mr. Paul said in 2000. “Changing a lot.”<sup>5</sup>



*John Peter Paul (Q̓lispé), 1998.*

Séliš elder Felicite Sapiye “Jim” McDonald (1922-2017) agreed. In her later years, she said, February did not often live up to its identity as the “coldest month.”<sup>6</sup> She recalled how it was when she was a little girl living with her family in a cabin along Finley Creek, in the southern part of the Flathead Indian Reservation. During the winter, her stepfather John Pilko would saw big blocks of ice out of the creek, and haul them into the family root cellar to preserve food all summer. But toward the end of her 94 years, Ms. McDonald noted that the creek often lacked ice of any depth.<sup>7</sup>

The observation of declining snow and ice, and warmer winters, is echoed

by many other elders of the Flathead Reservation. Ksanka (Kootenai) elder Ignace Couture recalled how in the past, Flathead Lake iced over every winter, but now does so rarely if ever. Séliš elder Louie Adams (1933-2016) and Q̓lispé elders Michael Louis Durglo, Sr. (1935-2015) and Stephen Smallsalmon (b. 1939) all observed the lack of snow in most recent years.<sup>8</sup> Their accounts echo the observations of elders in native communities across North America, particularly in Alaska, where native villages have depended upon reliable ice for thousands of years. Thinning ice has been described, for example, by Mike Williams of the Akiak Native Community, Jerry Wongittilin, Sr. of Savoonga, Ellen Richards of Wales, and William Takak of Shaktoolik.<sup>9</sup>

The parallels in observations of climate change between elders of the Flathead Reservation and elsewhere extends beyond the matter of ice, snow, and cold. Just as Michael Louis Durglo, Sr. noticed “new kinds of different birds” in the Northern Rockies, so Kitty Simonds of Hawaii noticed the appearance of different fish species, and members of the Quinault and Quileute Nations have reported an influx of anchovies and sunfish and a corresponding decline in salmon.<sup>10</sup> Just as Stephen Smallsalmon described the diminishing size of huckleberries and chokecherries in Q̓lispé territory, so John T. Doyle of the Crow reported the decline of buffalo berries, juneberries, and elderberries, and Helen Clifton of the Gitga’at (Coast Tsimshian) Nation reported more frequent collapses in wild crops of Saskatoon berries, soapberries, salal, pigeonberries, thimbleberries, and currants. “Everything is different now with the warmer weather,” Ms. Clifton summarized. “Harvesting times are way, way different.”<sup>11</sup>

Felicite Sapiye McDonald was worried that now, in the middle of winter, we often hear thunder. She said that when she was growing up, first thunder was always in springtime. It was a special moment in the year, when bears would finally move away from their dens, and parents “would medicine their babies” for their health and well-being in life.

Ms. McDonald expressed concern about these changes, and what they mean for the people and the world. “Crazy stuff going on today,” she said. “The old Indians would say, Qe es ʔctulult—‘We’re being punished’ for not living the right way.”<sup>12</sup>

Indeed, elders have recounted how the old people have long known this would happen. Q̓lispé elder and spiritual leader Pat Pierre (1929-2018) said that when he was a young boy, his grandmother told him that in Mr. Pierre’s own lifetime, something would happen that they called ʔx<sup>w</sup>lasq<sup>w</sup>tí—change in the climate. “The earth is going to become warm. . . the snow and ice is going to melt in the north, and the oceans are going to fill up, islands are going to flood . . . summertime will be extremely hot, wintertime you aren’t going to get cold weather . . . I never believed it back in those days, but I have actually seen the change.”<sup>13</sup>

The overwhelming majority of climate scientists now understand the prescience of what Pat Pierre’s elders told him in the 1930s. Most climate scientists furthermore agree that the primary cause of global warming is our burning of fossil fuels.<sup>14</sup> The mechanism is simple, and has been known for a long time.<sup>15</sup> Coal, oil, and natural gas are all concentrated forms of stored energy from the sun, created and distilled over many millions of years. That’s why they are



*Felicite Sapiye McDonald (Séliš) and Antoine Incashola, Sr. (Q̓lispé), 2010.*

called “fossil” fuels. They remain safely locked in the ground until we extract them. When we bring them up to the surface and burn them, we release into the atmosphere long-sequestered storehouses of carbon dioxide, methane, and other gases. These gases then linger in the atmosphere for decades or even centuries, where they trap heat from the sun, preventing or delaying that solar energy from escaping or reflecting into space.

The atmosphere has always functioned as a gigantic “greenhouse,” shielding us from the extreme temperatures of outer space. Through the course of human history, the composition of atmospheric gases has maintained a delicate balance, manifesting in the generally stable climate and the seasonal regime that

has made our existence and cultural development possible. But for more than 150 years now, since the industrial revolution hit full swing, we have been emitting more and more greenhouse gases, primarily carbon dioxide, throwing our atmospheric greenhouse out of balance. The amounts we are pumping and dumping into the atmosphere exceed the capacity of our planet’s natural systems to remove those gases, to precipitate them in carbon “sinks” such as forests and other vegetation, or in the formation of shells in sea creatures. As a result, atmospheric carbon is accumulating at ever-increasing rates. This is why the earth is rapidly, although not uniformly, becoming warmer and warmer. Our climate is becoming less stable and more given to extremes. We are seeing

more records of all kinds: record highs, record lows, record droughts, record floods, record storms.<sup>16</sup>

Fossil fuels remain today the source of much of the energy we use for the production and distribution of food, clothing, and other consumer goods; for the warming, cooling, and lighting of our buildings; and for the cars, trucks, trains, and aircraft that transport us. Dirty sources of energy are used because they are readily available by extracting them from the earth, and for deeper reasons as well, rooted in the very foundations of the dominant society. In that way of life, the driving engine of the economy is competitive self-interest, and individuals or businesses often do not pay for the social or environmental damage that is imposed on others in the conduct of business.

This problem is most troublesome when what is being harmed is the “commons”—those areas of our society or our world that all of us depend upon, but which are not owned by any one person, corporation, or government. The commons are therefore especially vulnerable to exploitation. For example, it is difficult to protect the open oceans, which lie beyond national jurisdictions, from overfishing by private fleets of boats. The problem of the commons arises even more severely in regard to our atmosphere—a “global commons,” as University of Colorado law professor

Sarah Krakoff has put it.<sup>17</sup> Not only is the atmosphere an often unprotected dumping ground, but no matter where emissions of carbon dioxide, methane, or other gases occur, those emissions contribute to greenhouse gas levels everywhere.

The challenge we face is made even greater by the time lag between increases in greenhouse gas levels in the atmosphere and corresponding increases in temperature. Now as throughout the earth’s climate history, the full effect of the emissions we are releasing will only be felt in the future.<sup>18</sup> As a result, it is extremely difficult for us to remain fully aware of, or concerned about, the harm we are creating. And that, in turn, makes it difficult for our society, or humanity as a whole, to feel fully motivated to make the necessary changes.<sup>19</sup>

All of which brings us back to what Séliš elder Agnes Vanderburg said. When it comes to the climate crisis, the truth does hurt. And as Sarah Krakoff has noted, “American Indian tribes and people have contributed very little to the causes of global warming, yet for geographic, cultural, and demographic reasons, they stand to suffer disproportionately from global warming’s negative effects.”<sup>20</sup>

But we must not and need not despair. For history—and in particular the history of Indigenous peoples—shows



*Robin Wall Kimmerer (Citizen Potawatomi Nation), 2016. Courtesy Dr. Kimmerer*

us that human beings are capable not only of adapting to changing conditions, but also of living in profoundly differing ways. We are able to live in ways that respect and care for our planet, and for one another. In fact, for the vast majority of human history, we have lived in such a way. As Professor Robin Wall Kimmerer (Citizen Potawatomi Nation) has put it, “For much of human’s time on the planet, before the great delusion, we lived in cultures that understood the covenant of reciprocity, that for the Earth to stay in balance, for the gifts to continue to flow, we must give back in equal measure for what we take.”<sup>21</sup>

Tribal histories furthermore reveal that people prefer those ways of life.

Indigenous communities have fiercely resisted changing or abandoning them. Many native communities still practice them, and even those who have been forced to adopt aspects of the dominant way of life still hold and teach and celebrate the foundations of the old ways—the cultural knowledge and understandings, the spiritual connection and respect for the natural world, and the knowledge of tribal history handed down from the ancestors. Moreover, as we will see in this essay, native nations in many places are now working with great energy and dedication to revitalize those cultural ways and pursue projects of environmental restoration. In powerful and innovative ways, they are bringing together traditional ecological knowledge and scientific method and technology.

If we turn to the teachings of tribal communities, we will find a path out of the crisis we face: in the shorter term, a capacity for adaptation and restoration rooted in the millennia of Indigenous presence on the land, and in the longer term, what Professor Krakoff has called “a deep version of sustainability...a way of living on the earth... that allows each of us, in the company of nature, to thrive, but that proscribes any of us from living beyond our ecological means.”<sup>22</sup> This is the greatest hope offered by the example of native nations.

## PART 2

# Climate & Coyote



When the elders talk about these things, they begin with the beginning, with what Séliš and Q̓lispé people call the sq̓llúmt, the creation stories.<sup>23</sup> They are told only during the wintertime.<sup>24</sup> They explain how the world took its present form, and how human beings are meant to live on earth.

For thousands of years, these stories have been passed down, from generation to generation. They hold within them the foundations of Séliš and Q̓lispé culture and spirituality. When the cold weather arrives, the people gather to tell them, and to listen with respect and reverence (even though they are often humorous).<sup>25</sup>

Many of the stories tell about Coyote, who was sent to this land—*ye čunk̓*, this island—to prepare it for the *łsq̓lix̓*, the-human-beings-yet-to-come.<sup>26</sup> Using his skill and cunning and courage and power, Coyote destroyed the *nałsq̓lix̓* (monsters, or literally, those-who-eat-human-beings). Coyote made the land safe and abundant in everything people would need. He showed the right way to live: a way of respect for each other, and the land and waters, and the plants and animals. He showed human beings how to live in balance, moving with the seasons to harvest the foods and medicines when they were ready and where they were plentiful, taking only what was needed, and leaving plenty for other living things.

As Coyote showed the people-yet-to-come the proper way of life, he also left behind the signs of his deeds, permanent reminders preserved in landmarks and place-names across Séliš and Q̓lispé homelands. As tribal people today pass by these places, the ancient names by which they are known bring to mind the stories and their teachings. *Snt̓rup̓łm*, Place Where You Come Out. *?amtqné*, Sitting on the Edge. *Tmsm̓tí*, No Salmon, and *Ep Sm̓tí*, Has Salmon. *Snetetšé*, Place of the Sleeping Baby. *Sq̓lew̓ Stq̓eps*, the Beaver's Dam. These names and many others serve as constant reminders that the tribal way of life, and the tribal connection to these places, reaches back to time immemorial.<sup>27</sup>

Some of the Séliš and Q̓lispé stories associated with these place-names tell of a strange and now vanished world. For a long time, the land was gripped in cold and ice. Great ice-dams blocked the rivers, and water flooded the valleys. The land was inhabited by larger and often dangerous versions of the animals we know today. And the stories also tell of the final retreat of the bitter cold weather, and the establishment of the climate seasons and climate we know: roughly half the year cold, and half the year warm.<sup>28</sup>

In more recent years, we have heard that same story told—that same strange world described—in another language and in a very different cultural context.

In the twentieth century, geologists began to figure out what occurred during the last ice age, when much of North America was buried under vast sheets of ice. Towards the end of that period, about 15,000 years ago, an immense glacier pushed south out of what is now Canada through the Purcell Mountains, until it dropped into the lower Clark Fork River valley near today's border between Montana and Idaho. By the 1920s, scientists began to piece together the evidence for what has long been related in some of the Coyote stories—how ice formed a vast dam, some two thousand feet high, and how a great lake formed behind the dam, filling many of the valleys of western Montana, including the Mission Valley, the central part of today's Flathead Indian Reservation. As the climate slowly warmed, the ice-dam eventually burst, releasing one of the greatest floods in the history of the planet. The waters blasted west across the Columbia Plateau until reaching the Pacific Ocean. The glaciers then pushed south through the Purcell Mountains again, and the dam re-formed, and then it burst again, and so on—dozens of times over the following two thousand years.

The uncanny parallels between tribal accounts and those of scientists can be seen not only in how both tell about that ancient frozen world, but also in the precise locations of the

major landmarks of the ice age. At site after site, we find specific places of significance in both Séliš-Qłispé creation stories and geologic history: the locations of terminal moraines, of the southernmost extent of the great continental glaciers, of the areas that were flooded. The concurrences are too numerous and too precise to be mere coincidence.

In short, the creation stories must be understood as—in part—oral history. They contain shared memories of the most distant reaches of the tribal past. The stories help us realize the extent of Séliš and Qłispé tenure on the land, reaching back to a time so long ago that we usually think of it as the province not of history but of geology. The stories help us realize that the Séliš and Qłispé connection to this place reaches back to a point in human history more than twice as old as the oldest Egyptian pyramids. What the elders have told us helps us make sense of the archaeological record, such as the 13,000-year old Anzick site, located



*Glacial Lake Missoula in Snyelmn Čtčewm (Mission Valley).* Painting by Brian Pickering.

along Flathead Creek near Wilsall, Montana, and not far from a mountain known in Salish as Cx<sup>m</sup>ín (Hide-Flesher).<sup>29</sup> The Anzick site, illuminated by the creation stories handed down to us from time immemorial, are the traces of the ancestors. Together, they are testimony to the ancient tenure of tribal people in the Northern Rockies.

That tenure matters for understanding the issue of climate change and the special insights that tribal people offer us in observing the changes that have already happened. Séliš and

Qłispé people developed a profound knowledge and understanding of the ecology of their vast territories in part because they have lived in one place for such an enormous span of time.<sup>30</sup> And because tribal ways of life were generally conducted within the limits of the environment, people were able to adapt to these shifting conditions and survive even dramatic climatic changes in the past.<sup>31</sup> As Nancy Turner and Helen Clifton noted in their essay centered on climate change in British Columbia, “Indigenous Peoples of northwestern

North America have always had to accommodate and respond to environmental change . . . People have traditionally made accommodations for resource fluctuations by turning to more easily accessed or predictable plant foods, even those less favoured, or to alternative species of fish or game. Trading is also a solution for localized scarcity.”<sup>32</sup>

The Séliš-Qłispé creation stories and their associated place-names tell us not only how deeply rooted the tribes are in this place, but also how completely the traditional way of life is tied to the climate. Even the stories themselves are bound by the seasons; as mentioned above, they are told only when the cold weather is here, and the snakes are asleep. The climate we have known, the cycle of the four seasons, is woven throughout the culture, the way of life, and the consciousness of tribal people in the Northern Rockies.

Elders have said that when people see a coyote today, they should wave, signaling that they haven’t forgotten what Coyote did. The accompanying map of place-names that refer to creation stories is a geography of tribal remembrance, of continuing gratitude to Coyote and the other animal-people for preparing the land and climate that sustains human beings. Indeed, one of the most important elements of the Coyote stories, as Felicite Sapiye McDonald related, is that “It

was the animals who decided there would be human beings.”<sup>33</sup> In their transformation from animal-people into the animals we know today, some of them agreed to become food for the úsqélix<sup>w</sup>, the people-yet-to-come. Tł x<sup>w</sup>ix<sup>w</sup>eyúł u nq<sup>w</sup>onmíntmn łu sqélix<sup>w</sup>, said Qłispé elder Pete Beaverhead (1899-1975). “The animals took pity on Indian people.”<sup>34</sup>

Qłispé elder Mitch Smallsalmon (1900-1981) said:

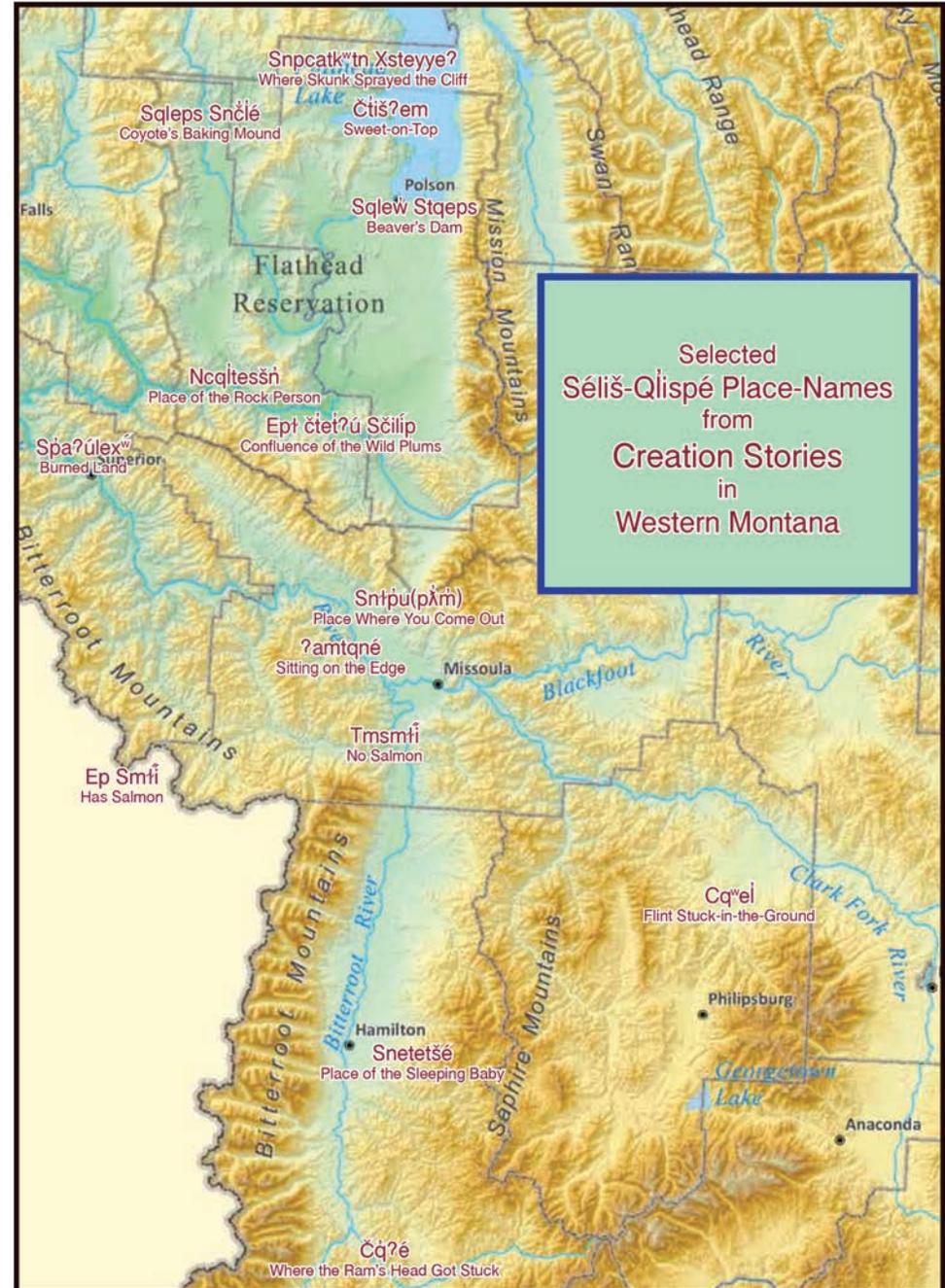
T šey t x<sup>w</sup>ix<sup>w</sup>eyúł u  
esmalýémsts łu sqélix<sup>w</sup>.

It was the animals that always  
medicined the people.

T šey t x<sup>w</sup>ix<sup>w</sup>eyúł u esmeyyełts  
łu sqélix<sup>w</sup> qł malyémistis.

It was the animals that  
told the people the ways of  
medicining themselves.<sup>35</sup>

Each of these Séliš and Qłispé elders—Felicite McDonald, Pete Beaverhead, and Mitch Smallsalmon—was reminding us that human life is only possible because of the sacrifice and generosity of the animals, plants, birds, and fish. This is the foundation of the covenant of reciprocity. It is why, before digging bitterroots or camas, or picking berries, or cutting up animals that have been killed, the people always offer a gift: kinnickinnick leaves, or berries, or something else to show gratitude, and to pray that the plants



and animals will continue to provide. As Pat Pierre has said many times, people must give before they take. And they must never waste. “If you kill an animal for nothing,” Michael Louis Durglo, Sr. said, “the animals will turn against you.”<sup>36</sup> Many elders emphasize that when hunters bring animals into camp, the people always try to waste nothing, and to respectfully take care of whatever is not used. This honors the one who gave its life so that the people might live. The ethic of not wasting anything also holds true for plants, for berries—as Pete Beaverhead said, “for anything else they gathered or killed.”<sup>37</sup> Those personal acts of respect were woven into the whole structure of traditional society.

For thousands of years, this was the way that people lived in the Northern Rockies, and across the Americas. The tribal economy or mode of subsistence—the way in which food and all the necessities of life were obtained—was organized with an ethic of living within appropriate limits. In this way of life, people did not live as separate individuals, each pursuing their own self-interest in competition with one another. Rather, people lived together as tribes, in close community, conducting most activities together, for the well-being of the people as a whole. No one took too much for himself or herself.



*Men gathering for Séliš-Qłispé esýapqeyñi (celebration), 1906, Snyelmn (Place Where You Surround Something—St. Ignatius, MT). SQCC.*

In order to more fully understand the Séliš and Qłispé way of life, we must look more closely at the yearly cycle of the seasons—the way in which subsistence and climate were directly interconnected, in ways that kept the people’s dependence on the environment at the forefront of their consciousness.

*Pete Beaverhead (Qłispé), c. 1940, Snyelmn Mq̓móq̓w (Mission Mountains).*

Photo by Tom Incashola. Courtesy Antoine Incashola, Sr.



## PART 3

# Seasons of Gratitude



The end of winter was often a time of some scarcity. The stored dried foods from summer were running low, and meat was in short supply. But always there was a good supply of fish. And then gradually, the signs of spring returned. The elders' memories reflect their quiet, careful attention to the environment: their observance of the reemergence of *sítíičí* (pussy willows) around the wetlands, and the first yellow bursts of *sčiyá'łmn* (sagebrush buttercups) peeking through the thawing earth. Little Mary Finley told us. “U łu *łčł̄a*, *šey* łu es *š'í* *še ctk'k̄we*” — “And the blackbird, that is the first to come back.” “Sic *še k̄six* sic esya?” “Then the wild geese come back, and all the other birds follow.”<sup>38</sup> Then as now, the people welcomed the song of the first *sax̄łc̄* (robins). They listened for the first thunder, knowing that is when the bears begin moving away from their dens. As the weather warmed, the people used larch to help their bodies get ready for summer. They took the tips of new needles from young trees, asking them to help, and prepared a tea that thins the blood for the warm months ahead.

When the people see the hills come alive with the white blossoms of the *s̄yeȳe'* (juneberry, a type of serviceberry), then they know it is time to dig bitterroot. As *Séliš* elder Louise Vanderburg told us, the arrival

of the bitterroot is a time of prayer and thanks.<sup>39</sup> *Spełm łu es nšicin t̄l esyá'* *t'e stem̄*. *Še u eč̄xey łu q'w meyéłts łu tin p̄x'p̄x'wot*, Agnes Vanderburg said. “Bitterroot is the first to be prayed for, before everything else. That's the way it was explained to me by my elders.”<sup>40</sup>

The springtime bitterroot ceremony helps ensure the happiness and abundance of this first visitor, and all the other roots and berries — the hundreds of foods and medicines that follow the bitterroot and become available over the rest of the summer, in certain places and at certain times, across the *Séliš* and *Q̄lispé* homelands.<sup>41</sup> *Ne tas puté'ntx*”, *ńem eł n'ósne*, Agnes Vanderburg said. “If you don't do everything right or have respect for it, it'll disappear back into the ground.”<sup>42</sup> Beginning with the ceremony of thanks for the bitterroot, the yearly cycle of life is infused with spiritual respect and gratitude.

Although the *Séliš* and *Q̄lispé* were not agricultural, they maintained an active hand in managing their diverse and complex food base. As has been extensively documented elsewhere, the tribes managed many of their prairies and forests through the careful and highly skilled use of fire, which they used to increase forage for game (and in recent centuries, horses), and also to revitalize and fertilize berry patches, camas fields, and other plant foods.<sup>43</sup>



Sadie Peone and her *yaya*? Shirley Trahan (Séliš) checking *spełm* (bitterroot), 2018.

Wis *xe*?ect *tu t* *spełm* *k*<sup>w</sup>*e**m*t *č*<sup>w</sup>*e**m*t *č*<sup>w</sup>*e**m*t *le* *xe*?ect *tu t*, *tu t* *sx*<sup>w</sup>*e**li*, Séliš-Qłispé elder Pete Woodcock (1896-1978) said. “After they were done digging bitterroot, then they would dig and pick camas.”<sup>44</sup> *Sx*<sup>w</sup>*e**li* — camas — is a highly important and cherished food for the people. Not so long ago, each June, many wet areas and moist open valleys across Séliš and Qłispé homelands took on the appearance of shimmering lakes as the blue camas came into bloom.

The people would move to these prime camas grounds—places such as *Łłq*<sup>w</sup>*ó**le*?*x*<sup>w</sup> (Little Prairie), a place up the Jocko River from Arlee; *Qln*?*itx*<sup>w</sup>*e* (literally, Fresh or Moist Baked Camas), known in English as Camas Prairie,

in the western part of the Flathead Reservation; and *Qalsá*, the Potomac Valley, an area so rich in camas that people from many tribes came there and shared in its abundance.<sup>45</sup>

It takes the work of many people over many days to dig enough of the deeply buried bulbs and then dry them. After drying the camas, the people then pit-bake them for three days and two nights, along with other plant foods such as *šawtmqn* (tree lichen or “moss”) and *seč* (nodding onion). The baking process is a subtle, fine art, involving a complex layering system that ensures proper heat and steam, many other specific plants are used, including *s*?*atq*<sup>w</sup>*e*?*tp* (Ponderosa pine), *ppo* (willow), *tímu*? (yellow skunk

cabbage), *ix*?*xé*?*tp* (lady fern), and *čičitné* (mountain alder). It all must be done with precision and care—not only physically but also spiritually—or the camas will not come out right. When cooked properly, the raw camas is transformed from an indigestible fiber into a food so packed with energy that, as the elders have told, just a handful can sustain a hunter walking through the mountains for an entire day.<sup>46</sup> Baked camas could be stored for use all through the coming winter.

From the camas fields, the people continued on. The first blooms of *x*<sup>w</sup>*yé*?*tp* (western wild rose) told them

that east of the mountains, the bison calves were fat. Through the 1870s, large camps of Qłispé and Séliš people would ride toward the buffalo country in June. Other people stayed in the high western prairies to dig *sžuk*<sup>w</sup>*m* (Indian carrot or Gairdner’s yampah), or went to the mountains to gather berries. The first are the delicate, sweet *qéytqm* (wild strawberries).

Then as now, mid-summer was also a time of relaxation, gathering, visiting, and celebration. Since 1898, this time has been formalized on the Flathead Reservation as the Arlee Čulay (July) *Esyapqeyni* (celebration or powwow).



Rae Lynn Charlo (Séliš) with freshly dug *sx*<sup>w</sup>*e**li* (camas) at *Naptnišá Sx*<sup>w</sup>*cu*?*sí* (Trail-to-the-Nez-Perce Pass — Lolo Pass), July 2002.

Many of the dances and songs that became a part of the celebration, however, have been central to Séliš and Q̄lispé life from time immemorial.

As July moves into August, the harvest of the most important berries, s̄taq (serviceberries) and s̄išá (huckleberries), has always been supplemented by many other foods gathered in smaller quantities: n̄íé (gooseberries), pólplq̄n (thimbleberries), sqáq<sup>w</sup>ocn or sk<sup>w</sup>ñk<sup>w</sup>í (Indian potato or western springbeauty), s̄yēyē<sup>?</sup> (juneberry), st̄mtú (golden currant), s̄s̄ipt (grouse whortleberry), s̄x<sup>w</sup>ósm (foamberry or Canada buffaloberry), to name just a few. Most if not all the food plants also have medicinal uses or benefits.<sup>47</sup>

While people were picking berries or gathering other foods, they also engaged in fishing, just as during encampments today. Fishing, in fact, has always been done at all times of year, through all the seasons, providing a constant and plentiful source of protein. During spawning runs, people used weirs, fish traps, nets, and gaffing hooks to pull in great numbers that would be dried for future use. At other times, hook and line and other methods were used to provide good meals. As Mitch Smallsalmon said,<sup>48</sup> the pure, clear waters of Séliš-Q̄lispé territories, and the abundant fisheries they sustained, lay at the heart of the old way of life:

M̄a ʔu es s̄ʔi ʔu cwičtn ʔe  
s̄t̄ulix<sup>w</sup>, q<sup>w</sup>amq<sup>w</sup>mt ʔe s̄t̄ulix<sup>w</sup>.

In the beginning, when I saw  
this land, it was beautiful.

Ḫest ʔe s̄t̄ulix<sup>w</sup>.

This land was good.

Esya<sup>?</sup>, esya<sup>?</sup> u it cničt u es x<sup>w</sup>isti  
ʔu puti tas x<sup>w</sup>ʔit ʔu suyapi.

Everything, all things were  
used from the land when there  
were not many white people.

K<sup>w</sup>eñt esya<sup>?</sup> ye qe sewtk<sup>w</sup>  
ye qe nsis̄yētk<sup>w</sup> u Ḫest es  
momoʔop. Ḫest es eñesi.

All our waters, our creeks  
were flowing along good.  
It was going good.

L šey ʔe l sewtk<sup>w</sup> u ʔu x<sup>w</sup>ʔit ʔu  
x<sup>w</sup>ix<sup>w</sup>ēyut, ʔu s̄wēw̄t ʔu tʔe stem̄.

It is there, in the water—that  
is where there were many  
animals, fish and other things.

K<sup>w</sup>eñt šey še nk<sup>w</sup>úlex<sup>w</sup> qe  
sq<sup>w</sup>yúlex<sup>w</sup> ʔiʔe l sewtk<sup>w</sup>.

And by that, we were  
wealthy—from the water.

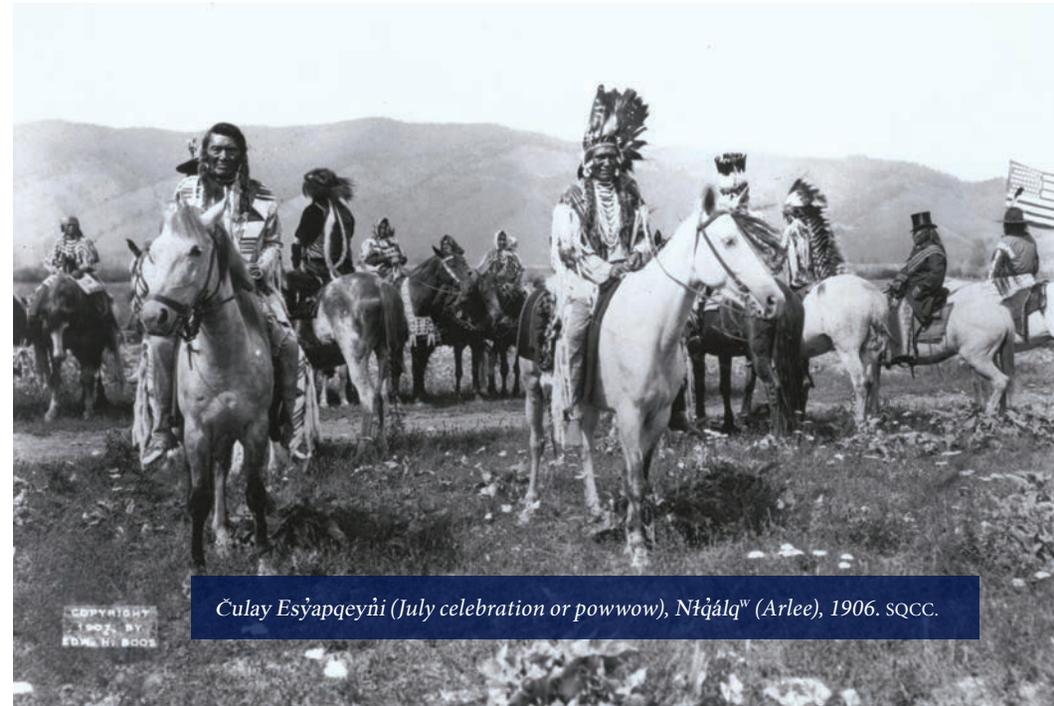
The Séliš and Q̄lispé therefore always located their winter camps at places known to have dependable fishing throughout the cold months.<sup>49</sup>

As the end of summer approaches, still other foods and medicines become ready, including ʔx<sup>w</sup>ʔo (chokecherry), which in the old way of life was pounded and dried in great quantities as a staple food for the long winter.<sup>50</sup> Some families would spend a week or two near the confluence of the Jocko and Flathead Rivers, called Ept Č̄teíʔú S̄cilip—Confluence of the Wild Plums—because it was the one place in western Montana where Coyote put č̄teíʔú (American plum), which by August produced an abundance of sweet, delicious fruit.

In September and October, the people gather the last plant foods and medicines of the year, including sk<sup>w</sup>l̄is (kinnickinnick or bearberry berries), sk<sup>w</sup>lsé (kinnickinnick leaves), stečcx<sup>w</sup>

(red osier dogwood or red willow), č̄éyč̄i (desert parsley), k<sup>w</sup>lit̄č̄iyétp (buckbrush), sʔitš (puffball), Snč̄lé ʔapmis (“Coyote’s arrow”—giant pinedrops), and ʔš̄isqá (curly-cup gumweed). Smaller quantities of seedy hawthorn berries are picked for use as both food and medicine, including both sx<sup>w</sup>ex<sup>w</sup>ʔenče (black hawthorn or Douglas’s hawthorn) and st̄moq<sup>w</sup> (Columbia hawthorn).<sup>51</sup>

As the cool months of fall approach, the people again ask caq<sup>w</sup>l̄s (western larch) to help their bodies adjust to the change of seasons, as they do in springtime. They again take the tips of new needles from young trees; but where this tea in springtime thins the blood for the coming summer, now it thickens the blood for the cold months ahead.



Čulay Es̄yapqeyñi (July celebration or powwow), N̄t̄qálq<sup>w</sup> (Arlee), 1906. sqcc.



Felicite Sapiye McDonald (Seliš) harvesting s̓išátq (huckleberries), 1994.

The elders tell how each day, after the men brought the game into camp, the women would expertly cut the meat into thin, wide slices, and then slowly cook it on racks over low fires. The dry-meat would then be divided equally among all the camps in the party, regardless of who had been successful in hunting and who had not. They

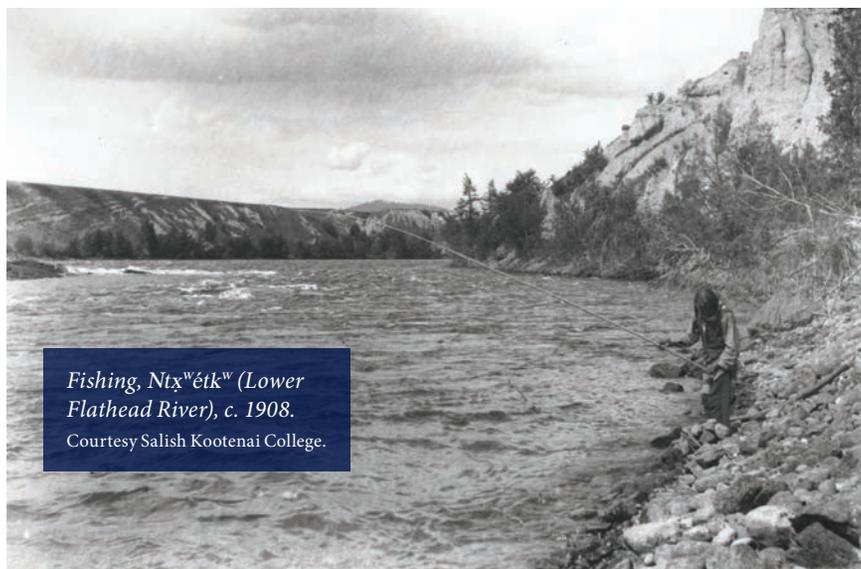
would pound the dry-meat lightly, making it just flexible enough to pack into their rawhide parfleches, often adding leaves of ɣnɣné (wild mint) to keep bugs away.<sup>52</sup> This was their vital store of winter meat, what the people depended on through the winter for their survival.



Drying meat, Seliš-Q̓lispé hunting camp, 2015.

As the snow and cold weather came, the people moved into the winter camps. And then they began to tell again the sq̓llúmt, the Coyote stories, the stories that explain how the world came to be. Winter was also the time for sewing moccasins, for making tools, and for trapping. People subsisted off of roots and berries that had been dried and

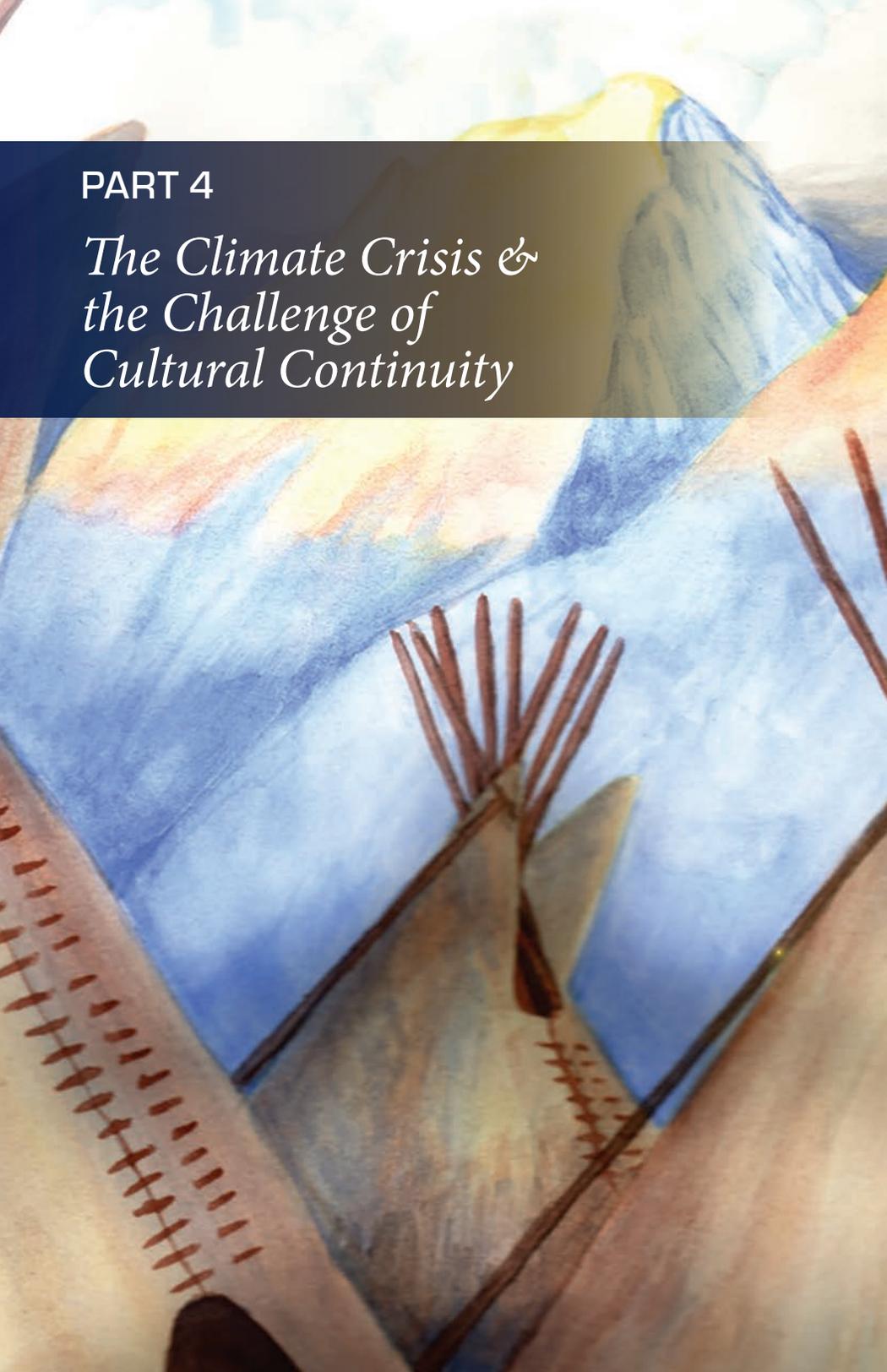
stored during the summer months, what game could be hunted in the deep snows, and fish. And then as now, winter was also the time for spiritual gatherings, for giving thanks for the past year of life, for healing the sick, for welcoming the new year and setting a good path for the coming four seasons.



Fishing, Nt̓ɣ'étk̓w (Lower Flathead River), c. 1908. Courtesy Salish Kootenai College.

Seliš family, Bitterroot Valley, c. 1885. Courtesy Glenbow Archives, NA 1443-19.





## PART 4

# *The Climate Crisis & the Challenge of Cultural Continuity*

In this short summation of the traditional way of life of the Séliš and Q̓lispé, we can see the profound ties between the climate and the culture itself. What does this mean in a time of accelerating climate change? Michael Louis Durglo, Sr. noted, “When it gets cold, snow up there on the mountains—that is when we start telling our Coyote’s creator story. But what is going to happen when we don’t have that cold and snow up in the mountains? So our story will be kind of confusing.”<sup>53</sup> As we noted above, February is called Čq̓osqn Spq̓ní, Moon of the Curly-headed One, after the creation-story spirit of extreme cold. If it no longer becomes bitterly cold, will the name of that month be stripped of its cultural meaning and power, reduced to little more than a meaningless “myth”?

The same questions emerge in regard to much of the tribal calendar. If the geese never leave because the winters are warmer, will March no longer be called K̓six̓v Spq̓ní (Moon of the Wild Geese)? If buttercups appear in January or February, as they have in recent years, will it make sense to still know April as Sčyałmn Spq̓ní (Moon of the Buttercup)?<sup>54</sup> If bitterroots are ready in March and camas in April, will the people forget that May is Sp̓ełm Spq̓ní (Moon of the Bitterroot) and June is Sx̓w̓e?lí Spq̓ní (Moon of the Camas)? If the berries continue to ripen earlier

or wither before they can ripen at all, what will become of the names for August (S̓isá Spq̓ní—Moon of the Huckleberry) and September (Łx̓w̓tó Spq̓ní—Moon of the Chokecherries)?<sup>55</sup>

Does this also mean that the spiritual foundations of the Séliš and Q̓lispé are at risk? What will be the power of the prairie chicken dance if sq̓w̓o (sharp-tailed grouse) is gone? What will be the connection to ancestors such as Christine Woodcock if splq̓w̓á (western painted turtle), the animal who gave her help, disappears? How will young people understand the beauty and spirit of sx̓w̓eyn (wolverine) if it no longer makes its trails through the mountains? If the creeks and rivers become too dry and too warm for aáyc̓cst (bull trout), will people be able to even imagine the ancestors’ stories of the waters full of three-foot long fish that could sustain winter camps through the long cold months? How will children absorb the stories of robin calling for rain if they cannot hear the song of sx̓ax̓lč as the thunderheads roll in from the west?<sup>56</sup>

Q̓lispé elder Steven Smallsalmon noted that the cultural knowledge of weather as it has been under the past climate regime was becoming increasingly irrelevant: “‘How come that muskrat is way over there?’ ‘Oh, it’s going to be a cold winter, you know.’ Or, ‘How come the squirrel and chipmunk is getting everything ready right away?’ Oh, the

old people used to say, 'It's going to be cold.' Yeah, sure enough, it was. We went by that."<sup>57</sup>

Mr. Smallsalmon points us to a great danger noted by a number of Indigenous people: how the changing climate and environment can erode the sense of security, pride, and respect that younger people have for the traditional cultural knowledge held by elders. Gitga'at (Coast Tsimshian) elder Helen Clifton stated, "Worldwide the weather is so different now. You can't depend on those old sayings."<sup>58</sup> Ilarion Mercurieff of Alaska's Global Center for Indigenous Leadership and Lifeways has said, "For the Aleut, this means that 10,000 year-old ways of surviving and thriving in this environment are no longer entirely relevant. And it's not just about food. These ways of life are essential to the healthy evolution of people and culture. Living in reciprocal co-existence with the sea lions, the fur seals, the salmon—this is an essential part of how Aleuts become whole men and women."<sup>59</sup>

Similar concerns are expressed by native leaders from the Northwest. Quinault Indian Nation President Fawn Sharp recalled her reaction when she saw, on a helicopter tour in the fall of 2011, that Anderson Glacier had vanished. The glacier is a vital source of cold water for the salmon spawning runs in the Quinault River. "My heart

sank," Sharp said. "I can't imagine trying to explain to another generation of Quinaults how our rich blueback salmon tasted. That's a central part of who we are and that glacier keeps the waters cool and the water levels at an appropriate place. Now it's gone."<sup>60</sup>

Amanda Karst, a Métis researcher with Canada's Centre for Indigenous Environmental Resources, has noted that in northern communities, where "the weather behaves so erratically now, people are not able to make judgments about their environment based on their teachings as they had in the past." The impact, Karst said, is two-fold. People no longer feel "as physically secure that their knowledge keeps them safe in their environment." But even more profoundly, they are no longer as "mentally secure in their ways of knowing."<sup>61</sup> As Sarah Krakoff wrote, "Climate change thus disrupts both the material practices that enable survival in harsh conditions and the cultural continuity that perpetuates those practices."<sup>62</sup>

Again we are confronted with the depth of the threat posed by the climate crisis in native communities. This is not only about the loss of material or "natural" resources. For native people, those are also cultural resources, or as some people are now saying, simply sources—the spiritual and physical sources of life itself. For Indigenous people, whose culture and very identity



Michael Louis Durglo, Sr. (Q̓ispé), 2006.

is bound so closely to the plants and animals and seasons, climate change imperils cultural survival.

And yet again we return to the powerful hope that springs from the continuing vitality of tribal communities in two important ways: first, adaptation, and second, the capacity for transformation.



*Mitch Smallsalmon (Qlispé) and kids, Arlee esʔapqeyni, c. 1978. SQCC.*



## PART 5

# *First Hope: Adaptation, Survival, & Restoration*



When Q̓ispé elder Pat Pierre recalled how his grandmother and other elders foresaw the coming of global warming, he remembered that they also told him something else: “The face of this earth may burn up, but it’s not going to destroy you. The timber will be gone, there will be no more timber, but you’re going to survive, because you are who you are. You are Indian. You understand the earth... You understand that, and you’re going to survive.”<sup>63</sup>

Mr. Pierre refers to the proven capacity of Indigenous people to adapt and survive, not only physically but also culturally—a point made by other native leaders. Micah McCarty, chairman of the Makah Tribe, noted “what our peoples have gone through to survive and adapt to changes that have been imposed on us.”<sup>64</sup> Potawatami scholar Kyle Whyte has argued, “Anthropogenic (human-caused) climate change is an intensification of environmental change imposed on Indigenous peoples by colonialism,” which has been survived by most native groups.<sup>65</sup> And Nancy Turner and Helen Clifton pointed to evidence reaching back over 10,000 years that testifies to the enormous changes that Indigenous peoples have experienced, and how “people have traditionally made accommodations for resource fluctuations by turning to more

easily accessed or predictable plant foods, even those less favoured, or to alternative species of fish or game... [Despite] the many environmental changes Indigenous Peoples have witnessed, endured and adapted to over the millennia... [including the impacts of] colonization... many people and communities have managed to retain their cultural identity and key facets of their knowledge systems.”<sup>66</sup> Indeed, we can see the strength and resilience of the Séliš and Q̓ispé in their having survived, both geopolitically and also culturally, through the devastation of epidemics of smallpox and other non-native diseases that took the lives of over 75% of their people in a very short period of time.<sup>67</sup>

In recent years, a great surge of tribal programs in environmental restoration has demonstrated the capacity of native communities to adapt and survive, and beyond that to thrive in radically changed circumstances. These efforts to revitalize the ecological and cultural resources of indigenous communities have wedded the traditional values of ecological respect with the tools of science and programmatic management. They draw, first and foremost, upon the profound tribal commitment to tribal homelands, the deep sense of rootedness in place and sense of responsibility for the lands entrusted to each indigenous community. They

draw from the powerful currents of cultural revitalization that have emerged in recent decades in many communities, a renewed respect for the language and cultural knowledge and spiritual traditions of the ancestors. And these efforts also draw from the rising number of tribal people who have gained advanced education and training in a wide range of academic and cultural disciplines necessary to carry out these projects.

On the Flathead Reservation, the Confederated Salish and Kootenai Tribes have a long history of pursuing environmental protection, perhaps most famously by setting aside the Mission Mountains in 1982 as the first formally designated tribal wilderness area in the U.S. Many of the CSKT's more recent initiatives have focused on restoration, from the largely successful effort to bring back the degraded Jocko River as habitat for bull trout and other native species,<sup>68</sup> to the reintroduction of endangered species such as trumpeter swans, to the adoption, in 2000, of a revolutionary forest management plan that deemphasized commodity production and instead made the primary goal the reestablishment of the kinds of forests that existed in the area under traditional tribal tenure.<sup>69</sup>

Among the most climate-threatened trees on CSKT forest lands is *sc̓itpálq*,

whitebark pine, the highest elevation tree in the region, often extremely long-lived. Already threatened by blister rust, whitebark pines are now facing additional stresses from global warming, which is spurring population explosions and range expansion of pine beetle. The Tribes are now engaged in an ambitious effort to save whitebark pine through a visionary approach that teams members call “biocultural restoration,” through which “tribal cultural ways are shaping every aspect of this endeavor, from the purpose and goals of the project to how we physically engage with the trees.”<sup>70</sup>

The CSKT's whitebark pine effort and overall forest plan are echoed by what Kyle Whyte has described as “the Menominee Nation's recent development of culturally, spiritually, and economically significant sustainable forest... [in] response to the colonially-induced destruction of their relationships with many species.”<sup>71</sup> The work of cultural and ecological restoration and revitalization is being undertaken in similar yet distinct ways by tribes across the continent, from the removal of dams to the teaching of critically endangered languages. “Our actions today,” Whyte has written, “are guided by our reflection on our ancestors' perspectives and on our desire to be good ancestors ourselves to future generations.”<sup>72</sup>



Pat Pierre (Q̓ispé), 2017.

The difficulty of addressing global climate change does not diminish the importance of local efforts to heal our damaged environment. If anything, the mounting ecological crisis only means that it is more vital than ever that every community on our fragile planet strives to care for its resources and to reestablish sustainable ways of life. Sarah Krakoff has said that “local climate action participants might be characterized as the leaders in planetarian identity formation, in that they perceive their moral obligations to extend to far-flung communities (both human and biotic) across space and time.”<sup>73</sup>

It is important that we acknowledge that the problem of climate change is so severe that it is already, in some cases, undermining tribal restoration efforts. On the Flathead Reservation, the lengthening fire seasons and more dangerous fire conditions in the forests are making it increasingly difficult to pursue the goal of restoring traditional fire regimes and pre-contact forest conditions.<sup>74</sup> In the Northwest, the rising waters of Puget Sound are projected by scientists to inundate and destroy some 900 acres of salt marsh around the Nisqually River delta, an area critical to salmon that was only recently restored through the combined efforts of the Nisqually Indian Tribe and the Nisqually National Wildlife Refuge.<sup>75</sup> Sarah

Krakoff has offered an even more sobering take: “Fish ladders, streambed restoration, and restrictions on over-fishing could all be for naught if the changes described [by climate scientists] cause the species to abandon the region entirely.”<sup>76</sup>

Nevertheless, tribal restoration efforts are helping create more resilient ecosystems, better able to withstand the impacts of climate change, many of which are either already underway or soon to begin. The more we are able to protect or restore vital habitats, the more we will be giving plants and animals, and the cultures that depend upon them, a better chance of surviving.

Yet beyond making adaptation more possible and ecosystems healthier and more resilient, the restoration projects of indigenous communities—in the Northern Rockies and elsewhere—are delivering something even more important.<sup>77</sup>



## PART 6

# *Greatest Hope: Leading the Transformation*



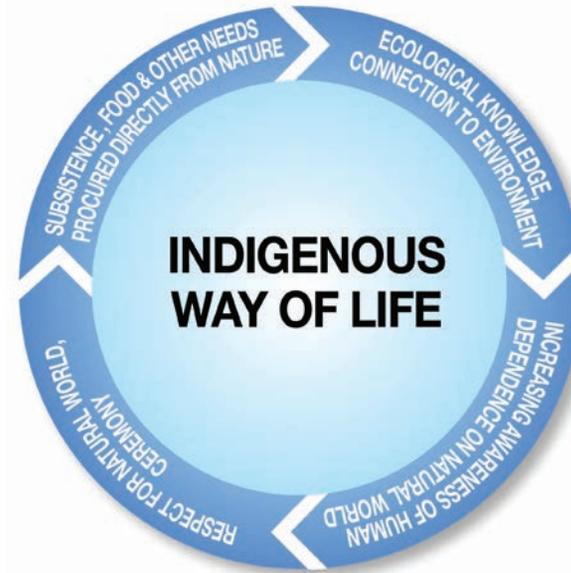
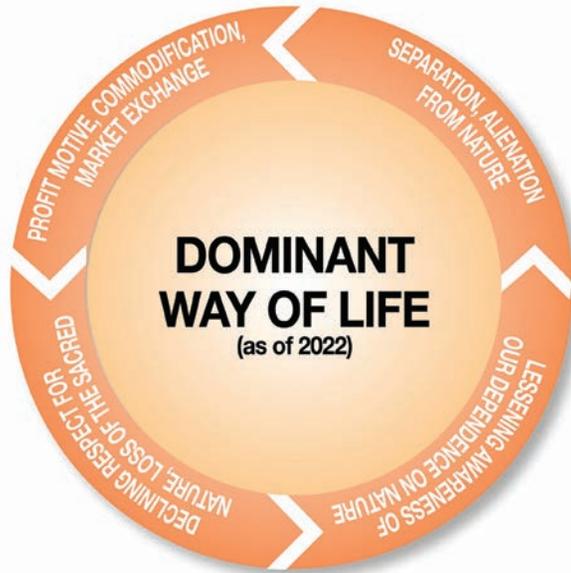
Tribal elders have been clear in identifying the root of the climate crisis: a dominant way of life that is fundamentally at odds with the way of life shown by Coyote in the beginning. “We take and take and take, and we never give back,” Pat Pierre has warned. “If we don’t give back, one day Mother Earth will say, ‘Šeý u hoy—That’s all, that’s the end... I can’t give no more. I have nothing more to give.’”<sup>77</sup> Global warming is ultimately the product of, as Robin Wall Kimmerer has put it, “a consumption-driven economy that asks, ‘What more can we take from the Earth?’ and almost never ‘What does the Earth ask of us in return?’”

In Kimmerer’s words, native people continue to serve as keepers of the covenant of reciprocity, and therefore have an essential role to play in reminding us how we can reestablish “cultures of gratitude.”<sup>79</sup> As Sarah Krakoff has said, “the American Indian worldview may also provide the blueprint for life in a zero-emissions world.”<sup>80</sup> Native peoples, in other words, continue to offer the world a path to transformation. In the broadest systemic view, we can see the contours and self-reinforcing dynamics of two fundamentally differing ways of life, and the ways they reproduce themselves. Industrialized societies driven by the profit motive, the commodification of natural resources,

and market exchange are inherently separated from—alienated from—the natural world. That dynamic leads to less awareness of human dependence upon the natural world, which in turn feeds a lessening of respect for and a desacralization of nature; and that then reinforces the separation from nature. Indigenous communities directly engage with the natural world to procure food and other subsistence needs; doing so serves to develop profound knowledge of natural world and cycles of life, and awareness of human dependence upon nature. And that manifests in respect, reflected in ceremonies and other cultural forms of gratitude, which then reinforces the connection to the natural world.

As Sarah Krakoff summarizes these basic and profound differences, “In the American Indian worldview, the point of life is to take care of where you live. You are a part of nature and it is a part of you...it remains your obligation to care for it. Every measure towards this end matters on a daily basis.”<sup>81</sup> We have an opportunity to listen, and to free ourselves from the illusion that we are somehow doomed, as if we cannot live a relationship of respect with the world around us. If we do listen, we will realize we have great reason for hope—and an obligation to future generations to act on that hope.

We know we can do this, because tribal ancestors did. If we take seriously the



example of tribal ways of life, and of tribal ways of understanding and relating to our world, we will open ourselves to a new realm of possibility. The great value of looking seriously at tribal history is that it can move us from the shaky ground of merely hoping that human beings can live in a respectful and sustainable way, to the solid ground of knowing that human beings have lived in such a way, and in fact did so for over 99% of our time on earth. This is the greatest gift from the native peoples, and the greatest basis of hope. Their indelible example has proven that what is possible is far greater than what we often assume—in terms of our relations with each other and with the earth, in terms of how we organize our economy and our society, in terms of how we define and develop our cultures.

We know we will do this, because the generations to come are depending upon us.

Micah McCarty, Chairman of the Makah Nation, posed the central question of indigenous ethics as we do our best to address global warming: “What does it mean to be a good ancestor? What does it mean to become a good ancestor?”<sup>82</sup> The reasons for doing all we can are clear, although the end result won’t be seen for many generations to come. What we do know is, as Sarah Krakoff has said, is that “the more emissions we add to the atmosphere, the warmer we will get.”<sup>83</sup>

Every time they address the subject of climate change, the elders remind us of one basic principle: we all must do what we can, and we must keep coming

*The cultural, economic, and spiritual feedback loops of radically differing ways of life. The dynamic displayed on the left remains dominant as of 2022, but it cannot continue. Our stark choice: will we reestablish the foundations of Indigenous ways by choice, or by catastrophe?*

together and unite our efforts to save the world.

“It’s here now,” Qlispé elder Pat Pierre has told us. “It’s actually here. What are we going to do? It’s people who caused it. Each one of us has a role. We have generations yet coming. We need to work on it every day.”<sup>84</sup>

We will close with something the elders have often urged us to remember. When they talk about caring for the generations yet to come, it is not only future generations of human beings. Séliš elder Louie Adams said that in the creation stories, when this world took its present form and the animals

became the animals we know today, they could no longer talk. So now we have to speak for them, and ensure that they have what they need in order to live well. “That’s why the old people said: ‘If you see an eagle flying around, or a hawk sitting on a tree, or a meadowlark sitting on a post, or rabbits coming around close to you, or any of these little creatures that come fairly close, they are telling you in their own silent way, ‘Hey, we are still here. We were here when you got here, and we will be here with you till the end.’ And that’s why you are supposed to take care of them...because they have no voice.”<sup>85</sup>

## ENDNOTES

- 1 There are many exhaustive reports on the issue, including those of the United Nations' Intergovernmental Panel on Climate Change (IPCC). Among the most recent and most authoritative U.S. reports is Donald Wuebbles (National Science Foundation), David Fahey (NOAA Earth System Research Lab), and Kathleen Hibbard (NASA Headquarters), lead authors, *U.S. Global Change Research Program Climate Science Special Report, Final Clearance, Fifth-Order Draft (5OD)*, 28 June 2017, available at <http://www.nytimes.com/packages/pdf/climate/2017/climate-report-final-draft-clean.pdf>, accessed 03 April 2023. Some of the main points in the report, as summarized by The New York Times, include:
- i "Temperatures in the country (excluding Alaska and Hawaii) have increased an average of 1.2 degrees Fahrenheit since 1900, [and] the Southwest and the Northwest, as well as the Northern Great Plains, have seen a temperature increase of 1.5 degrees or more. Heat waves and droughts had reached record intensities in some parts of the country."
  - ii "While it is not certain that the frequency of intense hurricanes will increase, hurricanes that do occur will bring more rainfall than ever and could potentially be more destructive." Two months after the completion of the report, hurricanes Harvey and Irma brought record levels of destruction to Texas and Florida.
  - iii "Warming will probably bring further reductions in [California's] winter and spring snowpack, which the state depends on for much of its water supply." If trend continues unabated, it will lead to "chronic long-lasting shortages."
  - iv "The amount of precipitation that falls in the heaviest storms is higher across the country... especially in the Northeast, where 27 percent more rain falls in the worst storms."
  - v "Tidal flooding is already occurring in places like Miami and Norfolk, Va., and will get worse throughout the century and affect cities on both coasts."
  - vi If not reversed, global warming will worsen sea-level rise "in the Northeast and along the Gulf of Mexico, in part because the land in those regions is naturally subsiding."
  - vii "Natural shifts in atmospheric patterns [such as El Niño] can affect temperature and precipitation from months to years...but have little influence on global or regional climate trends over periods of a decade or more."
  - viii The government report states, "It is extremely likely that human influence has been the dominant cause of the observed warming since the mid 20th century." The Times noted that the report said "there are no convincing alternative explanations supported by the observational evidence."
  - ix "The report warned there was a 'significant possibility' of climate surprises in the future, either compound events, where two or more extreme events occur simultaneously, or tipping point events where some threshold in the climate system is crossed."
  - x "The report warned there was a 'significant possibility' of climate surprises in the future, either compound events, where two or more extreme events occur simultaneously, or tipping point events where some threshold in the climate system is crossed."
  - xii "The report warned there was a 'significant possibility' of climate surprises in the future, either compound events, where two or more extreme events occur simultaneously, or tipping point events where some threshold in the climate system is crossed."



Louie Adams (Séliš), *Primm Meadows grove of ancient sʔatqʔap (Ponderosa pine)*, 2006.

only “be limited by deep, rapid, and sustained global greenhouse gas emissions reductions,” and that they must happen “this decade.” See <https://www.un.org/en/climatechange/reports> and [https://report.ipcc.ch/ar6sy/pdf/IPCC\\_AR6\\_SYR\\_SPM.pdf](https://report.ipcc.ch/ar6sy/pdf/IPCC_AR6_SYR_SPM.pdf), accessed 2023-04-03.

- 2 Nancy J. Turner and Helen Clifton, “‘It’s so different today’: Climate change and Indigenous Lifeways in British Columbia, Canada,” *Global Environmental Change* 19 (2009), 180–190, p. 185 (hereinafter Turner and Clifton). Turner and Clifton advocate, as an important part of the effort to document climate change, a systematic effort to gather the observations of indigenous peoples (p. 186): “The combined perceptions of Indigenous Peoples relating to changes in weather patterns, shifts in abundance, distribution, seasonal development and interactions of plant and animal species, and effects of these changes on soils, wetlands and other ecosystems, are an invaluable resource of knowledge... Yet, such knowledge has been little studied or documented in any broad systematic way. Observations of environmental change, recorded in detail across geographic scales and carefully compiled and analyzed, can help build a clearer picture of the range of effects of climate

change and how these effects interact across time and space. Many of the changes observed by indigenous and other local people are overlooked by urban dwellers, who tend to be more distanced from their food resources and often from the day-to-day effects of weather. Even ecologists and other scientists who study interactions among species and environments may not be aware of the nuances of change that can be discerned from generations of cumulative observation by long-term residents of a given place.”

- 3 Ibid., p. 186. Similarly, in Alaska, as Ilarion Merculieff has said, “The Aleut, as all indigenous peoples who have sustained an intimate contact with their immediate environments for generations, notice the subtlest of changes to this flora and fauna.” Merculieff, “Climate Change,” *The Global Center for Indigenous Leadership and Lifeways*, <http://gcill.org/mother-earth-the-environment/climate-change/>, accessed 8-8-2017 (but as of 2023, no longer available on the new website, <https://www.gcill.world>) (hereinafter Merculieff).
- 4 Turner and Clifton, 186.
- 5 John Peter Paul, Séliš-Qlispé Culture Committee written interview (hereinafter SQCC wi), 2000-02-24.

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6 Felicite McDonald, SQCC wi, 1996-09-11.

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7 Felicite McDonald, SQCC wi, 2002-03-12.

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8 Confederated Salish and Kootenai Tribes of the Flathead Indian Reservation, “Climate Change Strategic Plan” (Pablo, MT: September 2013) (hereinafter CSKT Climate Plan), pp. 28-35.

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9 Michael Louis Durglo, Sr. (Qlispé) said, “[In former times] you could tell it was winter because it was cold and the snow was deep. Sometimes, you would go down the county road—you only can see an inch of the fence post sticking out.”

Stephen Smallsalmon (Qlispé) said, “Today we do not have more snow. Do you know why? Why is it? How come we got so many fires?...There is not enough rain. Why is there bugs around, like those beetles? It’s too dry. It’s not cold enough to kill them all.”

Louie Adams (Séliš) remembered, “When I was little it seemed like there was always a lot of snow in the winter time. But any more it’s not like that. The old people used to say that in the winter when it got cold you could hear the trees pop. It sounded like a rifle shot. Then the Coyote stories would come out. Then in the spring, when you hear the first thunder,

then that’s when you put them away.” Mr. Adams also noted the decline in spring run-off: “Up Valley Creek, when I was young—we moved there when I was nine years old [c. 1942]—when the spring would break and the snow started melting, Valley Creek would just be roaring. There would be brush going down the creek, and stumps. Now it’s not like that. Yeah, you get run-off and high water, but nothing like I remember.”

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- 10 See Public Broadcasting System, “Native American Communities Affected by Climate Change Plan for the Future,” July 19, 2012 at 12:00 AM EDT, [http://www.pbs.org/newshour/bb/climate-change-july-dec12-tribes\\_07-19/](http://www.pbs.org/newshour/bb/climate-change-july-dec12-tribes_07-19/), accessed 03 April 2023 (hereinafter PBS 2012), and Alaska Native Science Commission, “Impact of Climate Change on Alaska Native Communities,” <http://www.nativescience.org/pubs/AFN%202005%20Impact%20of%20Climate%20Change%20on%20Alaska%20Native%20Communities.pdf>, accessed 03 April 2023 (hereinafter Alaska Native Science Commission).

Michael Louis Durglo, Sr. (Qlispé) in CSKT Climate Plan, p. 29, PBS, “Native American Communities Affected by Climate Change Plan for the Future,” and NWF 2011, op. cit.

Mike Williams stated, “In 50 years of my observation, I have seen a lot of changes, from cold winters that — and ice that was very safe into thinning of ice. And we had to move in some cases further north. Our hunters are going out further. Like, in Shishmaref, they are having to go 90 miles out to find ice to get their walrus and their seals. And they’re having to risk more going out further into the sea. And when the weather hits and then that’s where the loss of life occurs.”

A number of other Alaskan elders offered their observations in Alaska Native Science Commission, op. cit. Jerry Wongittilin, Sr. said, “There have been a lot of changes in the sea ice currents and the weather. Solid ice has disappeared and there are no longer huge icebergs during fall and winter. The ice now comes later and goes out earlier, and it is getting thinner. The current is stronger and it is windier on the island.”

Ellen Richards observed, “The ice at Wales when it forms - it goes out a quarter mile and forms a pressure ridge. The ice was very thin and rotted very early between the pressure ridge and the village.”

William Takak said, “Last spring we got only six walrus because of the weather and ice moving out too quick. A long time ago it used

to be real nice for weeks and even sometimes for months. Now we only have a day or two of good weather and this impacts our hunting. The hunters talk about the ice getting a lot thinner. It is going out too quick.”

Another alarming observation came from Micah McCarty, Chairman of the Makah Nation, who recalled that in 2006, the drought was so severe that for the first time, there were real concerns that the salmon “eggs in the returning runs might not be viable by the time the rains came.” PBS 2012, op. cit.

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- 11 Stephen Smallsalmon in CSKT Climate Plan, p. 31-32, John Doyle in John T. Doyle, Margaret Hiza Redsteer, and Margaret J. Eggers, “Exploring Effects of Climate Change on Northern Plains American Indian Health,” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3831579/#!po=4.20561>, accessed 8-6-2017, accessed 03 April 2023 (hereinafter Doyle et al.), and Clifton in Turner and Clifton, op. cit., p. 181-182 and 185.

Doyle et al. offer specific information on climate change and berry crops among the Crow: “Many species of berries have long been gathered as staple foods, including juneberries, chokecherries, elderberries and buffalo berries. Now these shrubs

and trees sometimes bud out sufficiently early in the spring that they are vulnerable to subsequent cold snaps that kill the blossoms, so they never fruit. In years that shrubs bear fruit, the timing has changed: chokecherries used to ripen after the juneberries, and now they ripen at the same time (V Buffalo, personal communication, 2013). Elderberries in the mountains now ripen in July instead of in August (J Doyle, personal communication, 2013). Buffalo berries were traditionally harvested after the first frost, as freezing sweetened the berries. Now buffalo berries are dried out before the first frost hits, so are no longer worth gathering (L Medicine Horse, personal communication, 2013).”

In the CSKT Climate Change Plan (pp. 31-32), Steven Smallsalmon also noted the disappearance of porcupines and frogs, and the increasing interruption of hibernation among bears: “Quills. You do not see that anymore. You do not hear frogs. I remember hearing them in the nights. Just sit there and listen to the frog... The bears slept all winter. Today, they... come out sometimes when it gets warm, because they have become mixed up too... [The bears then realize,] ‘Oh, it’s still winter time.’ “

These and other impacts have also been observed in British

Columbia, as noted by Turner and Clifton (p. 182): “Examples of environmental declines at least partially attributable to climate change effects include: dying western red-cedars on many parts of Vancouver Island, forests decimated by mountain pine beetle infestations, spruce budworm and other insect pests, notable decline in frog and other amphibian populations, and failure of eulachon runs in a number of rivers along the coast, especially the Kingcome and Bella Coola rivers.

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- 12 Felicite McDonald, SQCC wi, 2001-10-17. Séliš elder Louie Adams (1933-2016) expressed concern that the weakening of winter cold would result in increasing disease: “This is something the old people used to say about the cold weather. Maybe they didn’t know what germs were, but they knew that we had to have some really cold weather during the winter in order to get rid of sickness, scaál.” CSKT Climate Change Strategic Plan, p. 34.
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- 13 Patrick Pierre, author written interview, 20 Sept. 2017, and in CSKT Climate Change Plan, p. 33.
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- 14 See endnote 1 above.
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- 15 See for example American Institute of Physics, “The Discovery of Global Warming”

and “The Carbon Dioxide Greenhouse Effect,” January 2017, at <https://history.aip.org/climate/co2.htm>, accessed 03 April 2023 (hereinafter AIP 2017).

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16 See endnote 1 above. As noted in the *U.S. Global Change Research Program Climate Science Special Report*, Final Clearance, Fifth-Order Draft (5OD), 28 June 2017, “It is extremely likely that human influence has been the dominant cause of the observed warming since the mid 20th century.” The report said “there are no convincing alternative explanations supported by the observational evidence.” Both quotations from page 12. See also [https://19january2017snapshot.epa.gov/climate-change-science/causes-climate-change\\_.html](https://19january2017snapshot.epa.gov/climate-change-science/causes-climate-change_.html), accessed 03 April 2023.

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17 Sarah Krakoff, “American Indians, Climate Change, and Ethics for a Warming World,” University of Colorado Law School Legal Studies Research Paper Series, Working Paper Number 08-19, September 9, 2008 (5 Denv. U. L. Rev. 865 (2008)), available at <http://ssrn.com/abstract=1265804>, p. 2, accessed 03 April 2023.

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18 AIP 2017, op. cit.

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19 Krakoff notes that the “tragedy of the atmospheric commons” is worsened by the problem of

“Global warming’s spatial and temporal dispersions.” The “spatial dispersions” mean that “no matter where in the world you are, your emissions contribute to its increasing insulating properties...reductions in one part of the globe can be rendered meaningless by increases in another part of the globe.” Krakoff 2008, p. 2.

In a 2012 article, Krakoff notes Professor Stephen Gardiner’s analysis of global warming as “a true prisoner’s dilemma, as opposed to any other kind of collective action challenge, because it is possible for noncooperators to undermine the good produced by a subgroup of cooperators, and it is likely, working from the assumption of rational self-interest, that noncooperators will have the incentive to do so.” Sarah Krakoff, “Planetarian Identity Formation And The Relocalization Of Environmental Law,” 64 Fla. L. Rev. 1 (2012) (hereinafter Krakoff 2012), p. 98. Available at: <http://scholarship.law.ufl.edu/flr/vol64/iss1/3>.

On the other hand, Krakoff notes in her 2008 article, “Global warming is [also] a severely temporally lagged phenomenon,” meaning many of the impacts will not be felt until some future date, and then with increasing severity,

at which point the earth’s thermal momentum will make it too late to stop and reverse.

Taken together, Krakoff notes, the spatial and temporal dispersions of climate change lead us to Dale Jamieson’s analysis of the issue’s “paradigm moral problem.” As Krakoff summarizes Jamieson, human beings more easily recognize a moral issue when they see that “an individual acting intentionally harms another individual; both the individuals and the harm are identifiable; and the individuals and the harm are closely related in time and space.” Global warming meets none of these criteria, making it particularly difficult to raise consciousness of the issue as a clear matter of ethical treatment of other people and our fellow plants and animals.

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20 Krakoff 2008, p. 1. As early as 2003, for example, the General Accounting Office found that over 86% of the 216 Alaskan native villages were subject to flooding and erosion (Krakoff 2008, p. 18). In 2002, the Rodeo-Chediski fire burned over half of the timberlands on the Fort Apache Reservation. NWF 2011, op. cit.

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21 Robin Kimmerer, “Returning the Gift,” Center for Humans and Nature, published October 1, 2013, <https://www.humansandnature.org/earth-ethic-robin-kimmerer>,

accessed 03 April 2023 (hereinafter Kimmerer, “Gift”).

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22 Krakoff, 2008, pp. 28-29. Krakoff notes that while use of the term “sustainable development” became more widespread with the 1987 publication of the Brundtland Report, “Our Common Future,” by the World Commission on Environment and Development, it is in fact “an approach both centuries old and recently articulated, [one that] marries the ethical insights from the environmental movement with those from the human rights framework. It embodies the idea of viewing human and natural systems as interconnected, and of meeting all human needs in a manner that supports the health of the environment.” Krakoff’s definition of “deep sustainability” echoes Turner and Clifton’s characterization of native communities as “people who are long-term residents of a place, who have learned through systems of knowledge, practice and belief to conserve, maintain and promote their resources in situ.” (p.180).

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23 Linguist Steve Egesdal offered his “best guess” for an analysis of this unusual word: “\*s/q<sup>w</sup>l-núm<sup>t</sup>: nomalizer/talk-non-control reflexive, with the \*n becoming l through assimilation, with some specializing laryngealization

on the m (common for non-control forms).” The root, /q<sup>w</sup>(e)l-, is common and rather straightforward: “talk.” But the non-control reflexive suffix númt (lúmt), Egesdal explains, carries a more complex meaning that is more difficult to translate. He suggests “that one is talking about something general, not himself/herself, at length, as part of something not entirely within his control (but for something that he/she take some responsibility for).” Egesdal posits that the stories’ “spiritual essence” may explain the presence of this rare suffix; “perhaps the teller of a Coyote story is channeling something beyond himself/herself, hence the use of a lack of control notion in the non-control reflexive.” Steve Egesdal, Ph.D., email communication to author, Jan. 29-30, Feb. 2, and Jul. 27 and 29, 2012.

24 Pete Beaverhead said (SQCC OHA Tape 47 side 1, May 14, 1975),

K<sup>w</sup>e<sup>m</sup>t ñe q<sup>w</sup>lq<sup>w</sup>llu, k<sup>w</sup>e<sup>m</sup>t ýe č q<sup>s</sup> qe<sup>p</sup>c, x<sup>w</sup>a n<sup>p</sup>ł<sup>m</sup>u ýe staps<sup>q</sup>e sp<sup>q</sup>ni<sup>?</sup>s, k<sup>w</sup>e<sup>m</sup>t ci čalt sp<sup>q</sup>ni<sup>?</sup>s, čn nte l šey še k<sup>w</sup>łnšne<sup>?</sup>epis łu t p<sup>i</sup>p<sup>x</sup>o.

And when they tell the Coyote stories, when it’s close to spring, maybe at the end of January, the month of February, I think that’s when the elders would quit telling them.

Ñe we cuntm, “X<sup>w</sup>u q<sup>w</sup>llu še cu tma łe hoy yetłx<sup>w</sup>a łu sq<sup>w</sup>llumt.”

Even if a child told them to tell a story, the old people would tell them, “Remember, it’s over today, for the stories.”

Tma łu l sq<sup>w</sup>llu u k<sup>w</sup>łnšepntm — ñe put qe<sup>p</sup>c, še hoy łu k<sup>w</sup>esq<sup>w</sup>llu.

Because in the Coyote stories, they shut them down — just when it’s about spring, you will quit telling Coyote stories.

Ñe č<sup>?</sup>ey, k<sup>w</sup>łci l s<sup>?</sup>istč, me še eł łu sq<sup>w</sup>llu eł meye<sup>?</sup>ntm.

In the fall, just when it’s about to reach winter, then you can start telling them.

Ta łu l s<sup>?</sup>antq k<sup>w</sup>qe q<sup>w</sup>llumti.

Don’t tell Coyote stories in the summer.

25 Séliš elder Eneas “Tom Puss” Pierre (1908-1985) recalled that when he was a boy, his family often joined the tribal parties that traveled every fall across the Mission Mountains to hunt for their winter meat in the area near Seeley Lake. In the evenings, as snow fell in the mountains above the camps, many people would crowd into his family’s tipi, and the old people would tell the

sq<sup>w</sup>llumt. Tom Puss and the other children would listen in wonder and astonishment:

Łu t s<sup>q</sup>si, ne čna q<sup>w</sup>llu. Qe esyá<sup>?</sup> saq<sup>q</sup>cn.

Long ago, someone would tell the stories. We all lay there listening with our mouths open.

SQCC OHA Tape 16 side 1, Feb. 28, 1975. See also Salish-Pend d’Oreille Culture Committee and Elders Advisory Council, Confederated Salish and Kootenai Tribes, The Salish People and the Lewis and Clark Expedition (Lincoln: The University of Nebraska Press, 2005, rev. ed. 2019, hereinafter Salish People), pp. 7-9.

26 The word łsq<sup>q</sup>lix<sup>w</sup>, a term that appears only in the context of creation stories, consists of two meaning units (or morphemes): the prefix łł-, ‘yet to come into being,’ and the lexical suffix -sq<sup>q</sup>lix<sup>w</sup>, ‘people, human being.’ (Steve Egesdal, email correspondence with author, January 14 and 17, and February 2, 2012.) Jarold Ramsey writes, “That refrain of Transforming myths, ‘The People are almost here,’ must have evoked in Indian listeners at once a sense of tribal identity and purpose (they were ‘the People’) and a sense of wonder at a time before them, when they had no

being, but were being anticipated.” Ramsey, compiler and editor, *Coyote Was Going There: Indian Literature of the Oregon Country* (Seattle and London: University of Washington Press, 1977), xxvi. More than that, the stories consistently say that people were helped, their way of life prepared, by the animal-people; and the hosts then willingly transformed themselves into food for the coming guests. This pervasive aspect of the stories reflects both a profound existential gratitude, not to say indebtedness, to the animal-people for making human life possible, and a humbling acknowledgement of both the animals’ greater spiritual power and their prior claim to the land itself. It is a human-animal relationship that is further manifested in the central spiritual experience of young tribal people, the vision quest, in which they are usually left alone in the mountains by a parents or other guardian, sometimes for several days, to allow for the possibility of an animal or other spirit-being coming to them and giving them power to use in their life, for healing, in battle, or for other purposes.

27 In discussing Vine Deloria, Jr.’s classic book, *God is Red: A Native View of Religion* (New York: Putnam Publishing Group, 1973), Sarah Krakoff notes that “Because

most American Indian religions have this place-centric aspect, there is a corresponding totality to the role that religion has in Indian life. A place generates not just a list of rules to follow, but a whole life's worth of attitudes and behaviors... For Native communities, it is not just the place that matters, but the animate world of which it is a part: the animals, plants, seasons, and rhythms that flow from centuries of knowledge about a place and all of its emanations. Global warming is already affecting all of these aspects of place, and will continue to do so for some time to come." Krakoff, 2008, pp. 6 and 8.

28 Some examples of Coyote stories that may be in part a collective memory of the ice age or the distant past include Pete Beaverhead, "Origin of seasons: Q<sup>w</sup>oxmine<sup>?</sup> and Stolemtq<sup>w</sup>," SQCC OHCA Tape 3, side 1 and side 2 (1975), and "White Beaver, Wolf Brothers, and Wild Horse Island," SQCC OHCA tape 42, side 2 (1975); "Coyote Whips the Cold Man," in Louisa McDermott, "Ethnology and Folklore, Selish Proper" (M.Sc. Thesis, University of California - Berkeley, 1904), 47-48; "South Wind and the Cold," in McDermott, *Ethnology*, 51-53; "Coyote Whips the Wind," in McDermott, *Ethnology*, 54; "Bluejay Brings the Chinook Wind," in Ella E. Clark, *Indian Legends from the Northern*

*Rockies*, 4th ed. (Norman: University of Oklahoma Press, 1977), 112-114, and "Thunderbird, North Wind, Bluejay, Origin of Chinook Wind, and Today's Seasons," in W.H. McDonald, *Creation Tales from the Salish* (Billings, MT: Montana Indian Publication Fund, 1973); Eneas Pierre, "World destroyed by great flood," SQCC OHCA tape 13, side 2 (1975); "Coyote and the Dam on the Columbia," in McDermott, *Ethnology*, 18-19, and also mentioned in numerous other stories, including "Coyote and the Black Clam Women," McDonald, *Creation Tales*, as well as Duncan McDonald, "Coyote Brings the Salmon Up the Streams," *Bitterroot Journal* (Victor, MT) 4, no. 1 (Jan. 1978): 25; Lucullus McWhorter, "The Great Flood in the Flathead Country," in Clark, *Indian Legends*. Other stories may contain more metaphorical or less literal references to features of the end of the ice age, such as the location of terminal moraines or the southernmost limit of the glaciers, such as the story of the "swallowing monster" in the Jocko Valley and the starving animals living within its immense body (this story appears in many sources, including Agnes Vanderburg, Ignace Pierre, Jerome Lumpury, and Adele Adams, *Tales from the Bitterroot Valley, and other Salish Folk Stories*, as told to Kathryn Law and interpreted by

Agnes Vanderburg (Billings, MT: Montana Indian Publications, 1973) and Pierre Pichette, *Coyote Tales of the Montana Salish*, as told to Harriet Miller and Elizabeth Harrison, Exhibition of U.S. Department of the Interior, Indian Arts and Crafts Board (Rapid City, S.D.: The Tipi Shop, 1974)).

29 Juliet Morrow and Stuart Fiedel, "New Radiocarbon Dates for the Clovis Component of the Anzick Site, Park County, Montana," in *Paleoindian Archaeology: A Hemispheric Perspective*, ed. Juliet Morrow and Cristobál Gnecco (University Press of Florida, 2006). Perhaps the second oldest documented site, the McHaffie site south of Helena near Montana City, has been estimated at about 9,500 years. Points have been found in the Northern Rockies that suggest use of the mountains 8,000 to 10,000 B.P., and an excavated site in Powell County has been dated to over 9,000 B.P. Near Helmville, Montana, in the Blackfoot River drainage, materials have been found in layers beneath a discreet deposit of volcanic ash dated to about 6,750 B.P. Archaeological information courtesy personal communication from Stan Wilmoth, Montana State Historic Preservation Office, October 17, 2007.

Many scholars recognize the incompleteness of the

archaeological record, and believe that it is almost certain that people occupied the area at an even earlier time. Particularly on the west side of the Continental Divide, it is virtually impossible to determine any earlier human presence through archaeology, due in part to the ice age's cataclysmic effects, including the grinding and carving action of glaciers and the massive floods associated with the draining of Glacial Lake Missoula, combined with more complicated geological structures and less stable sedimentary deposits in the western valleys. Nonetheless, Interestingly, some of the traditional creation stories even suggest that Séliš-Q̓lispé ancestors may have been here when the ice age began. See also George C. Frison, *Prehistoric Hunters of the High Plains*, 2nd ed. (San Diego and London: Academic Press (Elsevier), 1991), and David Alt, *Glacial Lake Missoula and Its Humongous Floods* (Missoula, MT: Mountain Press Publishing Co., 2001).

30 SQCC oral history archives, and the notes and published writings of ethnographers such as James Teit, Claude Schaeffer, and Carling Malouf, provide a nearly unanimous sense that the Séliš and Q̓lispé bear a direct connection to the earliest human inhabitants of the region. They also agree on the tribes

having no traditions of having originated elsewhere.

Other sources, generally less authoritative but still important, do suggest an ancient migration into western Montana, although even they do not tell of other people having preceded the Séliš or Q̓lispé. The most interesting example is the account gathered by the WPA writer Bon Whealdon, in which Whealdon reports Q̓lispé elders as saying in the 1920s, “We know only the story our old men told our men down from the beginning: the first Salish were driven down from the country of the big ice mountains, where there were strange animals. Fierce people who were not Salish drove them south. So in our stories our people have said, “The river of life, for us, heads in the north.” Clark, *Indian Legends*, 92-93. Whealdon’s work is important; he interviewed a number of people in the Séliš and Q̓lispé communities of the early to mid-twentieth century, including Alex Beaverhead, Eneas Conko, John Delaware, Louise Finley, David Finley, Joseph and Tom McDonald, Mose Michel, Blind Michel, Charley Michel, Dominic Michel, Antoine Morigeau, Philip Pierre, Quequesah, Lassaw Redhorn, Francois Skyema, and Mrs. Allen Sloan. It is also true that he was not a trained ethnographer, and the phrasing suggests Whealdon

may have employed some artistic license. His translators are listed by Ella Clark as having been Harry Burland and Thomas Eulopson. Tribal elders alive today say Burland was not to their knowledge a fluent speaker, so he may have served as a transcriber. Eulopson was certainly fluent, and was connected to numerous traditional families. He is listed in the 1926 tribal census as a full blood married to Lucy Kickinghorse, with a child born in 1920. By the 1933 census neither the wife nor the child is mentioned, so they might have died in the interim.

By contrast, the work of the Boasian ethnographer James Teit indicates that elders in the early twentieth century made no mention to him of tribal migration into the region. “The Pend d’Oreille,” Teit wrote, “appear to have been in their late habitat a long time... The Pend d’Oreille consider the Flathead to be the head or parent tribe of the Flathead group and next to the Kalispel their nearest relations. I heard of no migrations of the tribe.” Teit reported the same for the Salish. Teit was fluent in Thompson, the Salishan language spoken by his wife, and he worked closely with Michel Revais, the preferred translator of the Salish head chief, Charlo (and his son, Martin Charlo). While Whealdon rarely if ever recorded

any terms in Salish, Teit’s written representations of Salish words are so accurate as to be almost always recognizable today to both fluent elders and Salishan linguists. Teit also carried out the most thorough and wide-ranging anthropological investigation of tribal origins and territories in the Northern Rockies and surrounding regions, interviewing numerous elders from many of the tribes. In the course of that work, he apparently heard no stories of the Séliš or Q̓lispé moving into Montana from other places. James Teit correspondence within Franz Boas papers, American Philosophical Society, Philadelphia, PA (Collection B B61), folder: Tribal territories and boundaries, p. 54/20, also 53/19 and 55/21.

31 Those cycles of drought, in particular, would later raise havoc with non-Indian newcomers as they applied farming and ranching to this environment. Agricultural modes of subsistence, and the permanent settlements they engender, lack the flexibility of hunting-gathering-fishing societies — their ability to move, disperse, or coalesce as conditions warrant.

As will be noted later in the essay, the Séliš and Q̓lispé also actively managed their vast territories with highly developed techniques of using fire. It is important to

distinguish between the relatively subtle techniques employed by the tribes in increasing the productivity of the land, and the more direct and coercive methods of agricultural and industrial activities. One of the most profound and stirring explorations of that systemic difference, and its unfolding in the history of irrigation in the western U.S., is Donald Worster’s *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Pantheon, 1985).

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32 Turner and Clifton, 181-182.

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33 Felicite “Jim” Sapiye McDonald, SQCC wi, 2011-01-10, 2011-01-25, and 2011-02-02.

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34 Pete Beaverhead, SQCC OHCA tape 36, side 1 (1975).

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35 Mitch Smallsalmon, 1981, in SQCC draft, *Voices of the Sq̓l̓ix*, chapter 4, introduction.

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36 Michael Louis Durglo, Sr., SQCC elders meeting, 2005-01-13. In Salish, this is called *es x̓č̓č̓stm*—when you do something wrong in a spiritual way, you end up being punished. This can apply to someone who fails to show respect to the animal when hunting, but it is a general term for the consequence of something spiritually wrong. Other examples could include misbehavior or

inappropriate conduct in the sweathouse. Felicite “Jim” Sapiye McDonald, SQCC wi, 2011-01-27 and Felicite “Jim” Sapiye McDonald and Tony Incashola, SQCC wi, 2011-06-06.

In the Séliš and Qlispé way, a successful hunt is as much the animal giving itself to the people, as it is the hunter taking the animal.

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- 37 Pete Beaverhead, SQCC OHCA tape 3, side 2 (1975).
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- 38 Little Mary Finley, SQCC OHCA tape 60, side 2 (1975).
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- 39 Louise Vanderburg, SQCC OHCA tape 074, side 1 (1975).
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- 40 Agnes Vanderburg, SQCC OHCA tape 073, side 1 (1975).
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- 41 Bitterroot is only one of the many foods that are welcomed after the long winter. People dig the delicious bulbs of qawxe (yellowbells) and peel the tender stems of mtčwe (arrowleaf balsamroot, whose roots, called táqʷoʷ, are roasted). Sxástqey (spikes of broadleaf cattail) are seeped or steamed like asparagus, and the roots of pištɔp (cattail) can be eaten raw or baked (in addition, cattail stalks are woven into mats). The celery-like stalks of xʷtɛ (cow parsnip) provide a juicy springtime treat.

In the mountains and foothills, the delicate yellow blooms of máxeʷ (glacier lily) carpet the open forests and meadows, where people harvest the leaves and corms. In certain areas of Montana, but more commonly in eastern Washington, biscuitroot—called pčlú or pxʷpuxʷ—are dug and eaten raw, or dried and stored for later consumption. Many other foods come early, such as sɔxʷoxʷep or išyétɔp (false Solomon’s seal) and ssilus (wild hyacinth). Spring also brings some of the first medicines of the year, such as tiitwi (horsemint, wild bergamont, or bee balm) and xnxné (wild mint or field mint).

All of these, and many others, are important springtime plants for the Séliš and Qlispé. And at the same time of the year, around the camps where these many spring foods and medicines were being harvested, people would hunt certain animals. One favorite was smčec—ground hog—which is not only eaten for food, but also prized for its grease, which was used by the men for fixing their hair. John Peter Paul, SQCC wi, 2000-06-19.

As the sap begins to run, the people take long flat-ended sticks and pry semi-circle slabs of bark from the trees. The inner cambium layer provides a delicious taffy-like treat, especially from certain trees. Sʷatqʷɔp (ponderosa pine), mulš

(cottonwoods), qʷqʷliʷt (lodgepole pine) and caqʷlš (western larch) are favorites. People are careful to take bark only from one side of the tree to avoid girdling it. In time the wound heals. To this day, scattered across western Montana, one may find ancient trees, especially ponderosa pine, bearing these “cultural scars”—mute testimony to the long tenure of Séliš and Qlispé people in the region. (Trees were scarred for other reasons as well, including as markers and signs, and from removing bark for use as a layer in the pit-baking of camas and other foods.) For another sweet treat, people also gather snčemcm—edible sap—especially from caqʷlš (western larch). Children are cautioned not to eat too much or they will get a stomach ache. Snčemcm can be gathered until the sap begins to dry up in fall. The hardened pitch from caqʷlš is also used for chewing gum. And at this time of year, in the spring, the people also use larch to help their bodies get ready for summer. They take the tips of new needles from young trees, asking them to help, and prepare a tea that thins the blood for the warm months ahead.

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- 42 Agnes Vanderburg, SQCC OHCA tape 073, side 1 (1975).
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- 43 When early non-Indian visitors reported the great bounty and

pristine quality of the region’s natural resources, few had any idea that they were observing a landscape that, as elders have told us, was not only the gift of the Creator, but which had also been shaped and nurtured for millennia by tribal people and tribal ways of life. See the award-winning interactive DVD *Fire on the Land: Native Peoples and Fire in the Northern Rockies*, by the Confederated Salish and Kootenai Tribes (Lincoln: distributed by the University of Nebraska Press, 2007, hereinafter *Fire on the Land*) for cultural information on the tribal relationship with fire, scientific material on the ecology of fire, and a series of forty historical essays, by the author of this essay, on the tribal use of fire and its repression over the past two centuries.

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- 44 Pete Woodcock, SQCC tape 09, side 1 (1975).
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- 45 See Salish People, op. cit. pp. 52-53. Qalsá is a term of unknown meaning from the dialect of the Smtéus, a now-vanished Salishan people. In the dialect of the Séliš and Qlispé, the area is called Eptʷítɔʷe (Has Camas).
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- 46 In the baking process, the inedible inulin in camas bulbs is transformed into fructose, a sweet and easily digested source of carbohydrate energy with a

very low glycemic index. Because fructose is 1.73 times sweeter than sucrose, one needs to consume less of it in order to satisfy a craving for sweetness. Yet the glycemic index of fructose is approximately 19, compared to about 68 for sucrose and 100 for glucose. A lower glycemic index suggests slower rates of digestion and absorption of the foods' carbohydrates, and may also indicate greater extraction from the liver and periphery of the products of carbohydrate digestion. A lower glycemic response usually (but not always) equates to a lower insulin demand, and may improve long-term blood glucose control and blood lipids. Some studies have concluded that fructose consumed before a meal may lessen the glycemic response of the meal. Other studies have recommended fructose for diabetics because it does not trigger the production of insulin by pancreatic  $\beta$  cells, probably because  $\beta$  cells have low levels of GLUT5. Information extracted 2010-07-28 from <http://en.wikipedia.org/wiki/Fructose> and [http://en.wikipedia.org/wiki/Glycemic\\_index](http://en.wikipedia.org/wiki/Glycemic_index), accessed 3 April 2023.

For these and other reasons, the high levels of fructose in baked camas, and the central importance of camas in the traditional diet, may have helped guard against diabetes — and conversely, this may help explain the epidemic

rates of diabetes seen among tribal people in the late twentieth and early twenty-first centuries, as the prevailing way of life became far more sedentary and the diet changed to one heavy in refined sugars and fats.

The transformation of camas through baking is recognized in the Salish language: only uncooked bulbs are called  $s\dot{x}^w e^?li$ , while the cooked camas is called  $\text{?it}\dot{x}^w e$  (this term is also sometimes used as a general term for camas). Salish terms also denote the way that pit-baking changes tree lichen from its inedible raw form, called  $\text{?awtmqn}$  or  $\text{Sn}\dot{c}\acute{l}\acute{e} \text{?}^w omqey$ s, into a black, chewy, licorice-like food called  $\text{sq}^w l\acute{a}$ .

- 47 Many other inedible plants are gathered in summer for medicinal use or use as tools, including  $\text{stmtmni}^?a$  (western snowberry),  $\text{tik}^w t\acute{a}$  (hard-stemmed bulrush),  $\text{k}^w t^?l\acute{i}$  (scarlet gilia),  $\text{n}\acute{t}amq\acute{e} \text{ s}^?i\acute{t}is$  (“black bear’s food” — black twinberry),  $\text{px}^w cu$  (meadowrue),  $\text{qpqt}\acute{e}$  (sage),  $\text{s}\acute{c}i\acute{a}ssn$  (fairyslipper),  $\text{sl}\acute{c}\acute{e}stye^?$  (beargrass),  $\text{sm}\acute{x}\acute{e} \text{ s}^?i\acute{t}is$  (“grizzly bear’s food” — mountain ash),  $\text{snlq}^w \acute{o}$  (showy milkweed),  $\text{st}\acute{l}i\acute{l}\acute{a} \text{ s}\acute{c}^?e\acute{k}^w s$  (“thunder’s flower” — Indian paintbrush),  $\text{su}\acute{l}\acute{a}q\acute{e}^?$  (western poison ivy),  $\text{s}\acute{x}s\acute{e}stiye^?$  (northern sweet grass), and  $\text{xawit}\dot{x}aw$  (pretty shooting star).

48 Mitch Smallsalmon, SQCC OHCA tape 178, side 1 (1977).

49 Eneas Pierre recalled that in the nineteenth century, the main Salish winter camp was located along the Bitterroot River,  $\text{ci } \acute{c} \text{ } \text{L}\acute{q}\acute{e}t\acute{m}\acute{l}\acute{s} \text{ ci } \text{xey}\acute{t} \text{ } \acute{c}ci^? \text{ ci}\acute{c} \text{ nis}\acute{q}^w o$  — “at Wide Cottonwoods [the area of Stevensville, Montana], a little further across the river.” He continued,

U i še i<sup>?</sup>istč, še tu x<sup>w</sup>a iše x<sup>w</sup>?it swėwł.

K<sup>w</sup>emł l še u iše istč tu sqelix<sup>w</sup> l Lqetmlš.

That’s where they would winter, because there were plenty of fish there. That’s why they would winter there, the people at Wide Cottonwoods [Stevensville].

SQCC OHCA tape 13, side 2 (1975). Like the Sėliš, the Qlišpé located their winter camps in places where a rich fishery would help sustain the people through the winter. In the early twentieth century, elders told the ethnographer James Teit about how “plentiful” fish were in the waters of the tribes’ territories, and that “in earlier times, when the people were more sedentary, fishing was engaged in to a considerable extent by certain bands of the Kalispel and Pend d’Oreilles, especially by the people living around Flathead Lake.” The lake was the center of

Qlišpé life—as Teit wrote, “the earliest recognized main seat of the Pend d’Oreilles...[with] several winter camps in the vicinity of the lake.” James A. Teit, “The Salishan Tribes of the Western Plateaus,” ed. Franz Boas, *Annual Report of the Bureau of American Ethnology*, no. 45 (1927-28), 348 and 311. Hereinafter Teit, “Salishan Tribes.”

Indeed, the Qlišpé band that lived in the Flathead Lake area was known in the Salish language as the  $\text{St}\acute{q}tk^w ms\acute{c}i\acute{n}t$  — the People of the Wide Water, after the name of Flathead Lake,  $\text{C}\acute{t}\acute{q}\acute{e}tk^w$ , meaning Wide Water. Anthropologist Carling Malouf wrote that “the density of occupation sites around Flathead Lake, and along the Flathead River...indicates that this was, perhaps, the most important center of ancient life in Montana west of the Continental Divide.” Carling Malouf, “Historical and Archaeological Sites and Objects,” in Leo K. Cummins, “Impact Assessment: Forest Land of the Confederated Salish and Kootenai Tribes of the Flathead Reservation, Montana” (unpublished ms, April 1974).

In April 1854, John Mullan traveled to an ancient traditional Qlišpé camp, located where the lower Flathead River leaves Flathead Lake. Now occupied by the town of Polson, Montana, the area was known by an ancient

Salish placename — Nēm̄q̄né (or, in long form, Nēm̄q̄nétk<sup>v</sup>), meaning the head or top of the water, the origin of the lower Flathead River. Mullan wrote,

We found at the lake four lodges of the Pend d’Oreilles, who have been here some weeks fishing; they presented to us, on arriving at their camp, with some fine fresh and dried salmon-trout. This lake, and also the Clark’s fork here, abounds in excellent fish, the salmon-trout being the most abundant. These latter are caught from the lake, often measuring three feet long. It forms one of the chief articles of food for the Pend d’Oreilles at this season. During the winter they often camp here when the lake is frozen over, when, cutting holes in the ice, they secure an abundance of these most excellent fish. While here, during the night we were aroused by a noise from the river, when, going to see whence it came, we found three men swimming the Clark’s fork; they had been fishing on the opposite bank, and, having secured a large number, they were returning to their homes. The night was somewhat cold, yet such is the hardiness of these men that they think nothing of undergoing fatigue of this character. On their

arrival at our camp they presented us with a number of these so dearly earned but excellent fish.

(I.I. Stevens, Report of Explorations, 553, and Isaac I. Stevens, “Narrative and Final Report of Explorations for a Route for a Pacific Railroad, near the Forty-Seventh and Forty-ninth Parallels of North Latitude, from St. Paul to Puget Sound, 1855,” in *Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean*, made under the Direction of the Secretary of War, in 1853-5, According to Acts of Congress of March 3, 1853, May 31, 1854, and August 5, 1854, Volume XII, Book 1 (Washington: Thomas H. Ford, Printer, 1860) (hereinafter Stevens, Reports of Explorations), 519. Note: Until the late nineteenth century, some non-Indians considered the lower Flathead River to be the upper part of the “Clark’s fork of the Columbia” and referred to it as such. Others called it the Pend d’Oreille River.)

The importance of fish in the overall subsistence strategy of the Séliš and Q̄lispé may come as a surprise to readers of the standard anthropologies of the tribes. To be sure, when there was opportunity for tribal hunters

to bring in red meat, that was usually the preferred food. Much of the ethnographic and historical literature, however, has both overstated the importance of animal protein and also understated the importance of fish for these tribes. In perhaps the least rigorous area of his generally excellent research, the ethnographer James Teit, who conducted field work on the Flathead Reservation beginning in 1909 under the direction of Franz Boas, dismissed fishing as “of much less importance to the Flathead tribes than hunting.” Teit did not define “importance,” although he was apparently using the crude measure of total caloric percentage in the diet — a metric that could not gauge the role of fish within the context of the tribes’ seasonal cycle and the region’s ecology, with its dramatic ebbs and flows of weather and food resources. As noted in the text above, Teit did note how “plentiful” fish were in the waters of the tribes’ territories, and he acknowledged the great importance of fish for the tribes “in earlier times.” Teit, “Salishan Tribes,” 348. But Teit never tried to rectify the rather contradictory picture he drew, and the researchers who followed him into Séliš and Q̄lispé communities in the early to mid twentieth century repeated almost verbatim his offhand

minimization of the importance of fish in the tribal way of life of the Northern Rockies.

Virtually all subsequent scholars studying the Séliš and Q̄lispé repeated Teit’s basic message of fish having almost no importance to the Séliš, but somewhat greater importance to the Q̄lispé. None of the researchers went much farther than that; none developed a more sophisticated understanding of fish within the tribal modes of subsistence and tribal history.

A quarter century later, George Weisel almost repeated Teit verbatim: “Although fish were extensively used for food by the Flathead, fishing contributed much less to their livelihood than hunting.” Like Teit, Weisel did make the point that in comparison to the Séliš, the Q̄lispé and Spokane “were much more dependent on fisheries.” Weisel, “Ethnozoology of the Flathead Indians,” *Journal of the Washington Academy of Sciences*, Vol. 42, no. 11, Nov. 1952, 346. Weisel also seems to have been simply incorrect in regard to both the extent of the native fishery and the relationship between fish as a food resource and the Salish mode of subsistence: “There were no large runs of fish in their streams that could be relied on to furnish ample provender at certain times of year.” Weisel’s erroneous statement regarding

the fishery is surprising, given his authoritative knowledge of ichthyology in Montana — among other things, he was the author of *Fish Guide for Intermountain Montana* (Missoula: Montana State University Press, 1957).

In his deposition before the Indian Claims Commission in 1952, the University of Montana anthropologist Carling Malouf presented a similar picture, but provided more detail in his description of Q̄lispé fishing practices: “Of the three tribes in the petition,” he stated, “the Pend d’Oreille did more fishing. They had fish weirs, as David Thompson mentions in his book, at the mouths of many of these side streams, some of which we can specifically name near Thompson Falls.... We also have informant data that substantiates this. They also fished in Lake Pend d’Oreille, that is, they would go down there on occasion, and in Flathead Lake there was some fishing, but mainly in the streams. The Kootenai also fished for a good part of their subsistence. The Flatheads did some fishing, but not to the extent of the other two groups.” Tunison, *Depositions*, Vol. 1, p. 160.

Gordon Hewes, in his chapter on “Fishing” in Vol. 12 of the *Smithsonian Handbook of North American Indians*, gives similarly thin analysis to fishing among the Sélis̄ and Q̄lispé, even as he

detailed the numerous methods employed by the tribes. Walker, Jr. ed., *Vol. 12: Plateau*, 631. Hewes looks in greater depth at Kootenai fishing, arguing that the “systematic” emphasis they gave to fishing “set them off from their Plains neighbors” and suggested a mode of subsistence more typical of Plateau cultures.

50 Łx̄w̄tó (chokecherry) is also used as medicine for both people and horses.

Čk̄wik̄ (black elderberry or blue elderberry) is also gathered at this time as an important food, and its hollowed-out branches are used for flutes and storage containers. X̄w̄te (cow parsnip), which is gathered in spring for food, becomes dried out later in the year and is then used to make elk whistles. This is also the time when people go to the mountains to harvest x̄asx̄s (Canby’s wild lovage), s̄č̄lx̄lp̄ú (“clearing your eyes” — prince’s pine), and the leaves of s̄č̄tx̄ey lití (mountain tea or western Labrador tea), which are dried for use as tea throughout the year. People also gather many foods that are good to eat fresh but are unsuited for drying and storing, including m̄cuk̄ (black raspberry or blackcap). The sour berries of s̄c̄als (Oregon grape) are eaten fresh, and the plant is also used as a versatile medicine and for dye or paint.

51 The very hard wood of st̄m̄oq̄w̄ was used as handles for tools and weapons, and its two- to three-inch-long thorns were used by boys in games that trained them to be warriors with great resistance to pain. If left unpicked, hawthorn berries, like serviceberries (s̄ȳēȳé’ and s̄taq̄), dry on the bush, and could be picked even in winter.

52 Felicite “Jim” Sapiye McDonald, SQCC wi, October 2001, 2001-11-01, and 2011-01-10.

53 CSKT Climate Change Plan, p. 30.

54 Vince Devlin, “January Shocker: UM botany professor says blooming buttercups in the Bitterroot Valley easily the earliest he has on record and more strong evidence of global warming,” *Missoulian*, 19 Jan. 2006, p. C1.

55 The tribes’ deep understanding of the seasons, the understanding of the intricate connections in the timing of stages of plant and animal life, is described by Nancy Turner and Helen Clifton (op. cit., pp. 184-185) as “Traditional Phenological Knowledge.” They note that among many tribes, the names of months or moons are “encoded phenologies.”

Turner and Clifton explain the concept of “Traditional Phenological Knowledge (TPK)” as “one type of Traditional

Ecological Knowledge, paralleling the formalized study of species life cycle events and biological change known as ‘phenology’ (Rathcke and Lacey, 1985). TPK relates to traditional knowledge of seasonal timing of growth, development, reproduction and migration of organisms, which generally occurs in a predictable sequence based on temperature thresholds, length of daylight, moisture or other environmental determinants (Lantz and Turner, 2003). People everywhere have learned to use physical environmental indicators—onset of seasonal rains, first snowfall, or melting patterns of particular snowbanks—as well as biological indicators—spring leafing out of certain trees or shrubs, blooming of certain flowers, such as salmonberry (Davis et al., 1995), or appearance of certain migrating animals or birds—to predict optimal times for harvesting particular kinds of fish (e.g. spawning time for salmonids), for hunting certain animals or for picking berries or other activities taking place at more distant locations (Thornton, 1999). They can also predict abundance of a given species or productivity of certain plant resources through such indicators:

“For example, for the Tla’amen (Sliammon), the time around late February and into March, called

T’agams ta Walth, ‘Moon of the Frog,’ because this is when the spring frog chorus starts, signifies the beginning of herring spawning and the start of the harvest season. People collect herring eggs, hunt grouse and buck deer, and fish for halibut and spring salmon. Fawns and seal pups are born, and towards the end of this period, women harvest edible roots and green shoots and begin stripping cedarbark for baskets (Sliammon Treaty Society, 2005).”

56 Impacts on the spiritual and ceremonial aspects of other indigenous communities have been noted in a number of sources. John Doyle (Crow), for example, observed (Doyle et. al., op. cit.),

Ceremonial practices are being affected by high temperatures. In May and June, sundances are held; these are three- or four-day outdoor events during which the participants fast, dance and pray. One older sundance chief, who for decades has led this ceremony near Crow Agency every Father’s Day weekend, notes that the June weather has gotten progressively hotter and therefore the sundance has become increasingly difficult for fasting participants. He remarked that the cattails, which community members bring to participants for relief from the heat, used to average six feet in length, and are now only about

three feet long (L Medicine Horse, personal communication, 2013). Cattail (*Typha latifolia*) vigor, including both root and shoot biomass, has been found to decline with increasing soil dryness (Asamoah and Bork 2009). Other traditional sundancers have concurred that dancing has become tougher with progressively hotter summer weather (L Kindness and anonymous Crow Environmental Health Steering Committee member, personal communications, 2013).

In a similar vein, Sarah Krakoff noted that tribes in the Southwest, such as the Hopi, have “for millennia” been keepers of “cultural and religious ceremonies that revolve around maintaining the health and wellbeing of their sacred springs.” How would they respond if the springs dry up? Krakoff 2008, p. 19.

In reference to bull trout, see Thompson Smith, “Aáy u Sqélix”: A History of Bull Trout and the Salish and Pend d’Oreille People,” in the interactive DVD *Explore the River: Bull Trout, Tribal People, and the Jocko River*, Confederated Salish and Kootenai Tribes (University of Nebraska Press, 2011, hereinafter Smith, Aáy u Sqélix”). On pp. 115-116, the now six-year-old essay notes,

“There is one threat to the fish’s survival that remains

a profound concern. Global warming is not just a future possibility. It is unfolding now, and with ever increasing momentum. Bull trout are a species completely dependent upon the continued availability of very cold water. They are therefore particularly vulnerable to the warming temperatures predicted in western Montana by most climatologists, including the University of Montana’s Dr. Steve Running. As a prominent member of the United Nations’ Intergovernmental Panel on Climate Change, Dr. Running served as one of the lead authors of the UN’s 2007 reports on the state of climate change; he was a co-recipient of the Nobel Peace Prize awarded to the IPCC in the fall of 2007. Dr. Running and others have projected, in coming decades, dramatic reductions in the region’s snowpack. If their forecasts hold, streams will become drier and warmer in late summer and early fall. These trends must be reversed if bull trout and many other species are to survive. The world’s climate scientists are in overwhelming agreement that the situation is dire, and the need for action urgent. Their message to us is clear: if catastrophe is to be averted, if life on earth as we have known it is to continue,

the world’s alarming increase in greenhouse gases must be reversed. That is a task of unprecedented scale and complexity. It will require governments, businesses, and citizen organizations at all levels—national, international, and local, from the Jocko River to the United Nations—to mount a global effort to reduce atmospheric concentrations of carbon dioxide, methane, and other gases.”

57 CSKT Climate Change Plan, p. 31.

58 Turner and Clifton, p. 188.

59 Mercurieff, op. cit.

60 Lauren Morello, “For American Indians, Coping with Climate Change Is Ancient History,” *ClimateWire*, published in *Scientific American*, July 19, 2012 (hereinafter Morello). Available online at <https://www.scientificamerican.com/article/for-american-indians-coping-climate-change-ancient-history/> (accessed 03 April 2023). See also Krakoff 2008, p. 15): “Billy Frank, a Nisqually tribal member and leader who has led the battles over the Northwest fisheries, has said that ‘fishing defines the tribes as a people.’ Tribal leaders throughout the region express the same sentiment. Chairman Antone Minthorn of

the Umatilla Nation provided the following poignant testimony in congressional hearings about the collapse of the salmon runs: 'It is almost impossible to describe in words the pain and suffering this has caused my people. We have been fisherman for thousands of years. It is our life.'

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61 Turner and Clifton, p. 187.

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62 Krakoff, 2008, p. 17. Krakoff says that in Alaska, "elders have traditionally passed on centuries' worth of accumulated wisdom about how to read ice, snow, and other environmental conditions. That wisdom is proving empty in a world of changing weather. Not only does the inability to read the weather make travel and hunting more dangerous, it also undermines the ability of the elder generations to teach the younger generations... Due to climate change, Alaska Native communities are facing a cultural loss as profound as that suffered by the plains tribes when they were confined to reservations and forced to abandon the practices that gave their lives meaning."

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63 CSKT Climate Change Plan, p. 33.

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64 Morello, op. cit.

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65 Kyle Whyte, "Indigenous Climate Change Studies: Indigenizing Futures, Decolonizing the

Anthropocene," in *English Language Notes* (vol. 55, no. 1-2, fall 2017), p. 153.

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66 Turner and Clifton, 181, 182, and 186.

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67 Elizabeth A. Fenn examines the complicated interconnected histories of horses and smallpox in *Pox Americana: The Great Smallpox Epidemic of 1775-1782* (New York: Hill and Wang, 2001). See especially p. 222. A detailed accounting of the history of introduced diseases in the region is provided by Robert T. Boyd in "Demographic History until 1990," in Walker, Jr., ed., *Handbook, Vol. 12: Plateau*, 467-483. Boyd wrote the best history of the impact of non-native diseases in the Pacific Northwest, *The Coming of the Spirit of Pestilence: Introduced Infectious Diseases and Population Decline among Northwest Coast Indians, 1774-1874* (Seattle and London: University of Washington Press, 1999), based on his Ph.D. dissertation, "The Introduction of Infectious Diseases among the Indians of the Pacific Northwest, 1774-1874" (University of Washington, Seattle, 1985). Sarah K. Campbell's archaeological work has found that burial patterns indicated sudden disruptions in life in the Middle Columbia Plateau in the mid-sixteenth century -- perhaps

evidence of a smallpox pandemic beginning in 1519. See Campbell, "Post-Columbian Culture History in the Northern Columbia Plateau: A.D. 1500-1900" (doctoral dissertation, University of Washington, Seattle, 1989). Cole Harris, "Voices of Disaster: Smallpox around the Strait of Georgia in 1782," *Ethnohistory* 41 (4) (Fall 1994), 591-627, is also an important study of the impact of smallpox epidemics in the region prior to 1800. One of the earliest works to focus on the issue in this region was Leslie M. Scott, "Indian Diseases as Aids to Pacific Northwest Settlement," *Oregon Historical Quarterly* 29 (2) (1928), 144-161.

There are also numerous anecdotal records of smallpox and other epidemics striking Séliš-Ūlispé communities. Early observations of non-Indian explorers, fur trappers, traders, and missionaries include the Lewis and Clark journals; Claude E. Schaeffer, "LeBlanc and LeGasse: Predecessors of David Thompson in the Columbia Plateau," *Studies in Plains Anthropology* 3 (Browning, Montana: Museum of the Plains Indian, Indian Arts and Crafts Board, U.S. Department of the Interior, 1966); *David Thompson's Journals Relating to Montana and Adjacent Regions, 1808-1812*, ed. and with an introduction by M. Catherine

White (Missoula, Montana: Montana State University Press, 1950) and *David Thompson's Narrative of His Explorations in Western America, 1784-1812*, ed. J.B. Tyrrell (Toronto: The Champlain Society, 1916), especially chapter XXI, "Small Pox Among the Indians," which includes detailed accounts of the 1780 epidemic from Thompson's first-hand observations and through the account of a Piegan elder; Alexander Ross, *Adventures of the First Settlers on the Oregon or Columbia River*, ed. Milo Milton Quaife (Chicago: Lakeside Press, R.R. Donnelly & Sons, Inc., 1923); *Fur Trade and Empire: George Simpson's Journal*, ed. Frederick Merk (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1968); Warren Ferris, *Life in the Rocky Mountains*, ed. Paul C. Phillips (Denver, CO: The Old West Publishing Company, 1940); Harry M. Majors, "John McClellan in the Montana Rockies 1807: The First Americans after Lewis and Clark," *Northwest Discovery* 2 (19), 554-630; Gregory Mengarini, *Recollections of the Flathead Mission, Containing Brief Observations both Ancient and Contemporary Concerning this Particular Nation*, translated, edited, & with a biographical introduction by Gloria T. Lothrop (Glendale, CA: Arthur H. Clark Co., 1977); and Stevens, Reports of

Explorations, op. cit. In addition, numerous tribal accounts appear in the SQCC oral history archives as well as the ethnographic notes of James Teit, Claude Schaeffer, and Edward Curtis. These include a story of smallpox striking a Plains Kootenai band and leaving only a single survivor. Fenn offers a good but brief accounting of biological explanations for the extraordinary mortality rates of native people afflicted by smallpox (hemorrhagic smallpox, she notes, killed 97 to 100% of its indigenous victims) in *Pox Americana*, 253. See also “The Genetics of Vulnerability” in Charles C. Mann, *1491: New Revelations of the Americas Before Columbus* (New York: Vintage Books, 2005), 112-118.

This mounting body of scholarship and documentation has made it clear that by the early nineteenth century, epidemics had already been wreaking havoc among the Séliš and Qlispé for at least decades and perhaps even for centuries.

68 See Smith, “Aáy u Sqélix<sup>w</sup>,” op. cit.

69 See Thompson Smith, “Fire, Forestry, and Sovereignty on the Twentieth-Century Flathead Reservation,” one of 40 essays on history and culture of Séliš-Qlispé use of fire included in the interactive DVD and website by the Confederated Salish &

Kootenai Tribes, *Fire on the Land*, op. cit.

70 Michael L. Durglo, Jr., et al., “Sçitpálq<sup>w</sup>: Biocultural Restoration of Whitebark Pine on the Flathead Reservation,” in Brenda Groskinsky, ed., *Climate Actions: Local Applications and Practical Solutions* (2023, CRC Press).

71 Whyte, op. cit., pp. 160.

72 Whyte, op. cit., p. 160.

73 Krakoff 2012, p. 91.

74 See Thompson Smith, “Wildfire Wildcard: Global Warming and Fire in Montana,” in *Fire on the Land*, op. cit.

75 Morello, op.cit.

76 Krakoff 2008, pp. 12-13.

77 Kyle Whyte, op. cit., has noted (p. 158), “While Indigenous knowledges obviously have useful information about the nature of ecological changes, it is perhaps more interesting to explore how renewing Indigenous knowledges serves the motivation of people and communities to address climate change.”

78 Pat Pierre, author written interview, 20 Sept. 2017.

79 Kimmerer, “Gift,” op. cit.

80 Krakoff 2008, p. 3.

81 Krakoff 2008, p. 33.

82 Morello, op. cit.

83 Krakoff 2008, p. 31.

84 Pat Pierre, author written interview, 20 Sept. 2017.

85 CSKT Climate Change Plan, p. 35.

## ILLUSTRATION CREDITS

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