Contemporary Use of Wild Fruits by the Lakota in South Dakota and Implications for Cultural Identity

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ABSTRACT—We present modern-day uses of traditionally used wild fruits among the Lakota on Rosebud Reservation as determined from interviews conducted in 2012. We quantify modern-day uses of wild fruits for food, beverages, tonics, medicines (physical and/or spiritual), and crafts. Use of buffaloberries, buffalo currants, chokecherries, riverbank grapes, plums, rosehips, and other plant parts remain as customs among the Lakota although the knowledge and practice of using wild fruits may be waning. Many interviewees implied that traditional uses of wild fruits could help sustain cultural identity.

Key Words: indigenous knowledge, Lakota, Rosebud Reservation, wild fruits

Introduction

Although never a significant portion of the diet of the Sioux (Stene 1927; Useem 1947; Denig 1961; Nurge 1970), wild fruits have played important nutritional, medicinal, religious, and other cultural roles from prehistoric through modern times. Wild fruits were and are used in food dishes and beverages, for tonics and medicines, in spiritual ceremonies, and for crafts (Fig. 1). Early studies of plant uses (including fruits) among the Lakota-speaking Teton Sioux include the widely cited works of Melvin R. Gilmore. In 1911, as a graduate student at the University of Nebraska, Gilmore began extensive ethnobotanical studies on the Rosebud and Pine Ridge Reservations, and later on other reservations in South Dakota and Nebraska (Gilmore 1913a, 1913b) and in the region (Gilmore 1919, 1933, 1991). Another early student of Lakota plants usage was the Reverend Eugene Buechel, SJ, a Roman Catholic priest, who for much of his adult life worked with parishes on both Rosebud and Pine Ridge Reservations (Buechel 1970; Rogers 1980). Buechel's work included documenting various local plants, preparing plant vouchers, recording notes about usage, and expanding a Lakota dictionary.

The notes of Edwin Denig (1961), a fur trader on the Upper Missouri in the 1830s through the 1850s, contain information about wild fruit availability and preparation methods for the diets of the Sioux and neighboring tribes. In a master's thesis completed at the University of Chicago in 1927, Jessie Anderson Stene included information about fruit use among the Sioux. Stene (1927) studied lifeways, including diet, on Crow Creek Reservation in central South Dakota in the 1920s, where she found limited consumption of traded fruits (mainly dried prunes, raisins, and peaches, and rarely fresh bananas and oranges). However, she noted tribal members collected, dried, or otherwise prepared wild fruits, including grapes, plums, and chokecherries (Stene 1927).

Ruth Hill Useem (1947) conducted a survey in acculturation research on Rosebud Reservation for a PhD dissertation at the University of Wisconsin. She reported monthly rations of fruit on Rosebud Reservation from 1933 to 1939 at five pounds of dried prunes and five cans of tomatoes (Useem 1949, 77). Interviewees in Useem's

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Figure 1. Lakota woman making chokecherry patties, ca. 1920s–1930s, Standing Rock Reservation. By permission from Denver Public Library, Western History Collection (catalog number X-31710), Denver Public Library Digital Collections.

study generally agreed that "Indian food preparation [should] be kept [i.e., remembered]," such as *wasna,* a traditional dish using wild fruit (as cited in Nurge 1970, 73–74; Useem 1947, 175–76). A much smaller percentage of Useem's interviewees, however, reported that their parents taught them to prepare food the Indian way or reported plans to teach the way to their children (as cited in Nurge 1970, 73; Useem 1947, 175).

A later researcher, Ethel Nurge (1970), worked for six weeks on Rosebud Reservation in 1962, focusing on the total diet of tribal members, with some documentation of the use of wild fruit. She concluded that "[c] hokecherries, buffalo berries, wild grapes, and plums are collected, but not in any quantity" (Nurge 1970, 82).

In the South Dakota Writers' Project (1987), various authors reported stories and legends that include traditionally eaten plants and fruits among the Sioux. Compilations of uses of plants, including fruits, among prairie tribes include Kelly Kindscher (1987, 1992), and for North American Indian tribes, Daniel Moerman (1998, 2010). More recent ethnobotanical researchers among the Lakota on Standing Rock Reservation include Kraft (1990), and Ruelle and Kassam (2011), whose works report on aspects of wild fruit usage.

The "father of American anthropology," Franz Boas (1940; Stocking 1974; Moore 2012), espoused that indigenous human communities can only be understood in their own unique historical context. Knowledge of both historical and recent traditional plant uses among the Lakota may prove valuable (Krech 1999) to the tribe as one aspect of their cultural survival and physical and spiritual health.

The purpose of this study is to describe and quantify modern-day uses of traditionally used wild fruits among the Lakota of Rosebud Reservation, the *Sicangu Oyate* (Burnt Thigh), Brule Sioux in south-central South Dakota. Our primary objectives were to determine the (1) availability of traditionally eaten wild fruits, (2) extent to which local residents gather or otherwise obtain wild fruits, (3) modern-day uses and cultural roles of wild fruits and the plants that bear them, and (4) estimated amounts ingested or other uses of the fruits and other plant parts. This study is important because it documents how wild fruits continue to play a role in the cultural identity of tribal members.

Study Area

Rosebud Reservation in Todd County, south-central South Dakota (Fig. 2), is the home of a large segment

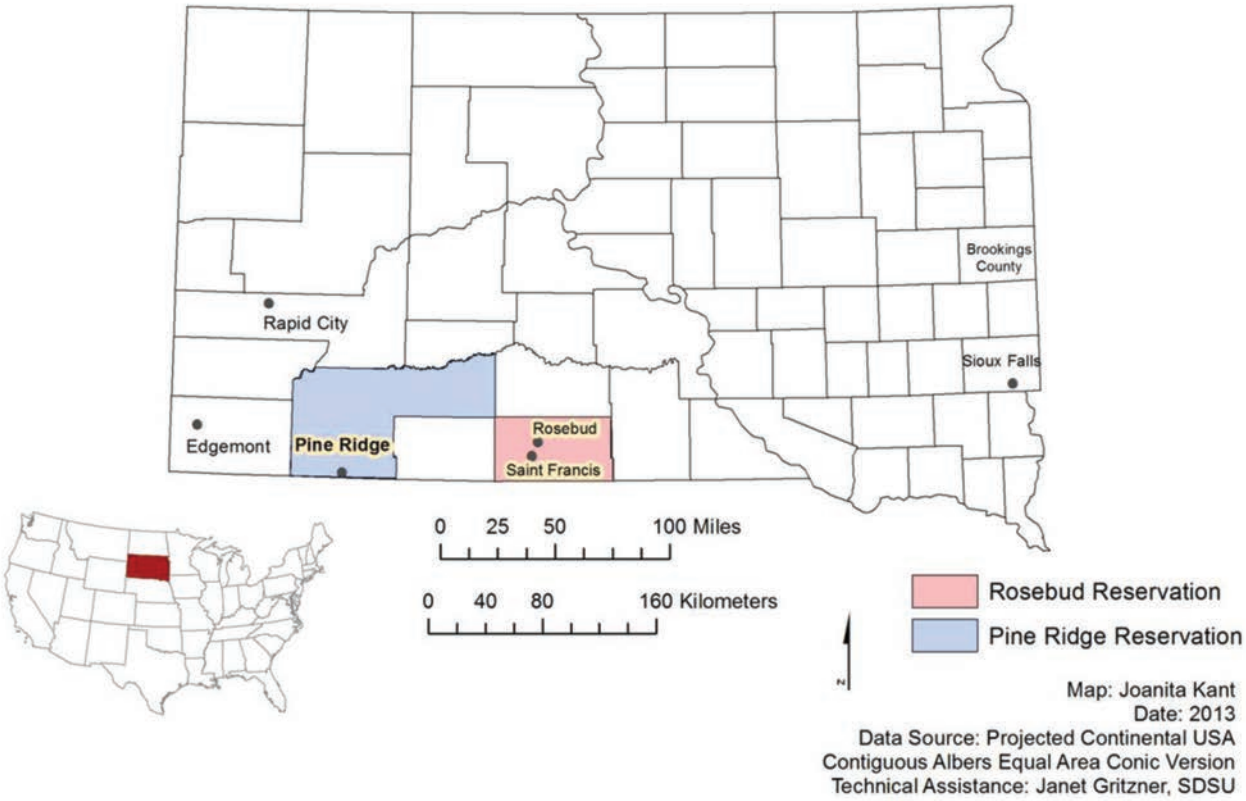

Figure 2. Rosebud and Pine Ridge Reservations in south-central South Dakota. We conducted interviews on Rosebud Reservation to supplement other research on Pine Ridge Reservation.

of the *Sicangu Oyate* (Brule) Lakota. Comprising over 356,123 ha (880,000 acres) (US Department of Agriculture/National Agricultural Statistics Service, South Dakota Field Office 2011), Rosebud Reservation has the seventh largest population of "American Indians and Alaska Natives" (a category within the US Census Bureau) in the United States. The Rosebud Sioux Tribe also holds trust lands in four counties nearby. Rosebud Reservation proper (Todd County) includes a population of 9,612, of whom 8,099 self-identify as American Indian, 989 as white, and the remainder as "other" (US Census Bureau 2012b). The combined population of the reservation proper and nearby trust land is estimated at 10,869, with 90% self-identifying as American Indians (US Census 2012a). Within the Rosebud Reservation proper, an estimated 50.2% of American Indians fall below the poverty level in comparison to 8.1% of whites (US Census 2012a). For the overall population of the State of South Dakota, 13.8% fall below the poverty level. Major employers on Rosebud Reservation include tribal government, Rosebud Casino, Sinte Gleska University and other schools, and Rosebud Indian Health Service. Agriculture is an important part of the economy through the production of corn, alfalfa, and other hay, as well as cattle (US Department of Agriculture/National Agricultural Statistics Service, South Dakota Field Office 2011).

Methods

We followed B. L. Berg's (2004) qualitative research method that allowed us flexibility in finalizing a suitable research strategy. Our original plan was to tape-record interviews, photograph interviewees, obtain data about how much wild fruit was currently used and for what purpose, and conclude by recording a traditional story about wild fruits. However, interviewees preferred that we type the interview responses rather than tape-record them. They did not want their photos to be included in the study. Some wanted to be anonymous. Others gave advice about how to deal with sensitive topics such as spirituality related to wild plants. Most interviewees wanted to tell their personal story and experiences with wild fruits rather than tell a traditional story.

Interviewee opinions resulted in a greater depth of understanding of the Native perspective and ways of tapping indigenous knowledge, ethical views, and sources of cultural sensitivity. Our literature review and a conversation with Cornelia White Feather, the first interviewee, heavily influenced adding a final question to our interview instrument: "Do you have a story about traditionally used fruits that you would like to tell?" Personal stories humanized the study, provided a particularly unique local viewpoint, and allowed an opportunity for unstructured Native participation, including documenting legacy information for future generations. Interviewees acted as consultants and provided valuable input to our research design. The result was a group discussion that accomplished the purposes of the research.

We used "snowball sampling" (Bernard 1998) to recruit interviewees because it is an effective method in working with this tribal community within Institutional Review Board regulations. In snowball sampling, a potential participant contacts others who contact others to assemble a group of participants. Rosebud Reservation residents Geraldine Provencial, a community outreach coordinator at St. Francis, and her friend Cornelia White Feather, helped to recruit participants. In addition, two members of the *Mni Wiconi* Elder Advisory Council volunteered to be interviewed.

The interview instrument included the following predetermined, quantitative and qualitative, structured and open-ended, questions (Kant 2013):

1. How much, in measuring cups, would you estimate that you eat of each of the following traditionally edible fruits (buffaloberry, buffalo currant, chokecherry, wild grape, wild plum, rosehips) in one year's time in an average year over the past five years?
2. How many cups of each, below, do you personally use, and are they as food, beverage, tonic or medicine? (buffaloberry, buffalo currant, chokecherry, wild grape, wild plum, rosehips) (if leaves, specify)
3. How do you use those fruits?
4. How do you prepare them?
5. Why do you collect and use those wild fruits in this modern day?
6. Do you have a story or stories that you would like to tell about any of those fruits?

We engaged thirty paid participants in hour-long, in-person oral interviews and added two others at a later date. We conducted all but two face-to-face interviews on Rosebud Reservation (at St. Francis Mission, at the Provencial family rural residence, or at the annual Rosebud Fair) from August 20 to 26, 2012. We conducted the final two interviews with the two Elder Advisory Council members on September 12 and October 4, 2012.

After a brief period of chatting to get acquainted and to confirm their general use of wild fruits, we asked interviewees to estimate amounts ingested and personal uses of each of six species of wild fruit based on a recent year with near normal rainfall and fruit production. We asked participants to report quantities in "measuring cups" (one cup equals 240 mL or 0.237 L by volume) as they acknowledged this as a handy common household unit of measure. We showed interviewees photographs of the selected plants and their fruits in case a participant was unsure of the plants in which we were interested, a rare occurrence.

Data Collection

The government of the Rosebud Sioux Tribe, through the actions of the *Mni Wiconi* Elder Advisory Council, granted permission to coauthor Kant to conduct interviews and to collect stories, under the condition that their office review and approve the final research report. Other tribal requirements included National Institute of Health certification for coauthors Kant and Berdanier. The Institutional Review Boards of both South Dakota State University and the Rosebud Sioux Tribe required detailed explanations of the proposed plan and assurances that interviewees would receive documents explaining their rights. While some interviewees preferred to remain anonymous, others gave permission to use their name. Each interviewee agreed that data collected in our project could also be used in another research project involving analysis of heavy metals in wild fruits on nearby Pine Ridge Reservation. Interviewees received and signed copies of all required forms.

We interviewed 32 participants and paid them sixty dollars for a one-hour interview. Time and resources did not allow for a larger study. We recorded interviewees' names, but we replaced some of the names with a number for those who requested anonymity. We documented the reported use and estimated quantity used for each of the six wild fruits that we selected for the study: buffaloberry (*Shepherdia argentea*), buffalo currant (*Ri-*

TABLE 1. Plant name, fruit product, and total number of interviewees who used product

Common name	Scientific name	Fruit product and number of interviewees who used it (in parentheses)
Buffaloberry	*Shepherdia argentea* [Pursh] Nutt	raw (17), **wasna* (1), ***wojapi* (9), jam (3), jelly (5), juice (4), syrup (1)
Buffalo currant	*Ribes aureum villosum* DC	raw (14), *wasna* (1), *wojapi* (6), jam (4), jelly (3), juice (4), syrup (1), twigs for craft (1)
Chokecherry	*Prunus virginiana* L. var. *melanocarpa* [A. Nelson] Sarg.	raw (19); *wasna* (10); *wojapi* (25); jam (4); jelly (9); juice (9); syrup (5); taffy (1); paste for roasting meat (1); poison ivy lotion (1); twigs for craft, ceremony, or pipe tamper (6); story (1)
Riverbank grape	*Vitis riparia* Michx.	raw (10), *wasna* (1), *wojapi* (1), jam (2), jelly (6), juice (4), syrup (2), popsicle (1), wine (1)
Wild plum	*Prunus americana* Marsh	raw (20), *wasna* (5), *wojapi* (20), jam (6), jelly (9), juice (3), syrup (4), plum butter (1), with roasting meat (1), poison ivy lotion (1), twigs for craft (1)
Wild roses	*Rosa* spp.	raw (4), *wojapi* (2), jelly (1), rosehip tea (5), leaf tea (7), story (1)

Notes: **wasna* = fruit pudding, ***wojapi* = pulverized meat and fruit (occasionally with corn).

bes aureum villosum), chokecherry (*Prunus virginiana* var. *melanocarpa*), riverbank grape (*Vitis riparia*), plum (*Prunus americana*), and rosehip (*Rosa* spp.). Of the 32 participants interviewed, 18 were women and 14 were men. Eight selected anonymity. Twenty-eight participants self-identified as enrolled members of the Rosebud Sioux Tribe. Others reported as follows: one Lakota was enrolled in the Cheyenne River Sioux Tribe in South Dakota, one Santee Dakota was enrolled in Nebraska, one Lakota was unenrolled because she lacked documentation, and one was a non-native who lived near the reservation in Nebraska but was a culturally integrated, lifelong laborer on the Rosebud Reservation.

We recorded actual ages when interviewees provided them. Otherwise, we estimated their ages. Within that protocol, we found most interviewees were between 40 and 60 years of age with a mean age of about 50 years. We recorded five participants in their 20s or 30s, 25 in their 40s, 50s, or 60s, and only two in their 70s or 80s. The method of attracting participants by "snowball sampling" probably created the expectation that only those with significant interest and experience with traditionally eaten wild fruits should come forward, thus creating a bias in favor of older participants. However, our study probably attracted fewer elderly participants (age 70 and older) because of the necessity of their traveling to a site where the interviews were being conducted, which in most cases probably presented a hardship. Some participants said there were topics they could not talk about because of spiritual beliefs or traditional knowledge that should not be revealed (Brandt 1980). In recruiting participants, we obtained as wide a range of adult ages as circumstances allowed and tried to interview an equal number of each gender. We did not intend to write a history, although interviewees consistently reported that their current uses of traditional wild fruits were affected by historical customs. During interviews, we often redirected the focus of participants' responses to the uses of wild fruits in the present day.

Results and Discussion

Availability of Wild Fruits

We chose the wild fruits of interest (Table 1) because they are common on Rosebud Reservation, based on reports by Gilmore (1913a, 1913b, 1919) and by Buechel (1983), whose plant voucher specimens remain at the Buechel Lakota Memorial Museum at St. Francis, South Dakota. In addition, for six weeks during the summers 2011 through 2013, we completed field studies widely across adjacent Pine Ridge Reservation, where we collected plant tissues and voucher specimens of the plants of interest. Other traditionally edible fruits such as

Juneberries, raspberries, and wild strawberries (Gilmore 1991) were not included because they are rare or absent on the reservation and thus seldom or not available.

On Rosebud and Pine Ridge Reservations, the plants of interest often grow along the edges of wooded draws, floodplains, rivers, creeks, and intermittent drainages. Wild roses also grow in badlands and pastures. Buffaloberries and buffalo currants sometimes dot pastures or grow at a short distance from forested drainages that are often fringed by thickets of chokecherries and plums. Riverbank grapes cling to trees and shrubs along drainages and are generally absent from treeless grasslands.

Interviewees confirmed that the plants of interest do not typically set fruit each year based on individual plant health and environmental conditions such as precipitation, pollination conditions, and browsing by deer and cattle. Interviewees occasionally reported that their families have secret places where they collect the best fruit.

Although the role is limited, the wild fruits of interest are part of the economy in Lakota culture. Interviewees report that locals occasionally sell some raw fruits or cooked fruit syrup at fairs, *wacipis* (dances), and other events. One interviewee sold bottled plum juice or syrup at the Rosebud Fair in 2012. Another interviewee reported that Hutterites from eastern South Dakota sometimes traded chickens for permission to pick wild grapes on her land in the recent past. In their ethnobotanical study on Standing Rock Reservation, Ruelle and Kassam (2011) also reported that Hutterites came to that reservation to buy wild grapes. Several participants reported that they would buy traditionally edible fruit products in local grocery stores if they were available. One interviewee noted that she bartered in exchange for wild fruits.

Modern-Day Uses and Ingestion

Some participants collected, ingested, and otherwise used (i.e., for crafts or as topical medicine) all the wild fruits in this study, while others used only a few (Table 2). Eighty-five percent of interviewees reported using at least one of the fruits of interest at least once a month. By way of contrast, respondents in a Cheyenne River Reservation survey among the Lakota generally reported consuming "[n]ative fruits such as chokecherries . . . [and] wild plums" on average less than once per month (Phillips and Finn 2000, 14).

Interviewees estimated the amounts of each kind of fruit they ingested (Table 2). They reported the amount normally used in a year of sufficient rainfall and good fruit production. They reported the wild fruits used most were chokecherry and wild plum. Table 2 indicates that use by fruit type ranged from none to 100 cups (23.7 L) per year of buffaloberry with an average of 2.8 cups (0.6 L), from none to 100 cups (23.7 L) per year for buffalo currant with an average of 2.6 cups (0.6 L), from one to 150 cups (35.5 L) per year for chokecherry with an average of 16.9 cups (4.0 L), from none to 80 cups (18.9 L) per year for riverbank grape with an average of 4.3 cups (1.0 L), from 0.5 cup (0.1 L) to 150 cups (35.5 L) per year for wild plum with an average of 15.3 cups (3.6 L), and from none to 64 cups (15.1 L) per year for rosehips from wild roses with an average of 3.4 cups (0.8 L) (or much less frequently, as wild rose leaves for tea). We found a large variation in the amount of wild fruit ingested, particularly chokeberry and plum (see Table 2 for means and standard deviations).

A few participants reported occasionally making small crafts with peeled twigs and branches from chokecherry, plum, and buffalo currant bushes. Chokecherry branches were most often used for dream-catcher wall hangings (Fig. 3) or in one case, for pipe tampers and vision quest sticks (Table 1). Although some discussed uses such as face painting or the dying of porcupine quills with fruits in the past, no one reported such present-day uses.

Diversity of Viewpoints

Interviewees expressed a wide variety of opinions about their experiences with and uses of wild fruits. They often noted before the start of an interview that they do not know any living person who knows all the traditional customs in using wild fruits. Because reservations such as Rosebud have open boundaries, migration of people and diffusion of ideas is to be expected (Boas 1940; Bashkow 2004). Consensus opinions and behaviors may be drawn from this study, but diversity of individual opinions and behaviors may be an important source of ideas necessary for cultural adaptation and survival (Boas 1940; Ruelle and Kassam 2011).

As examples, in the following three quotations, interviewees expressed particularly nonconsensus ideas (those marked with underlining).

> These foods show up mostly at ceremonies. For example, at *yuwipi* (healing) ceremonies, I expect to see chokecherry *wojapi* (pudding). Once in a while

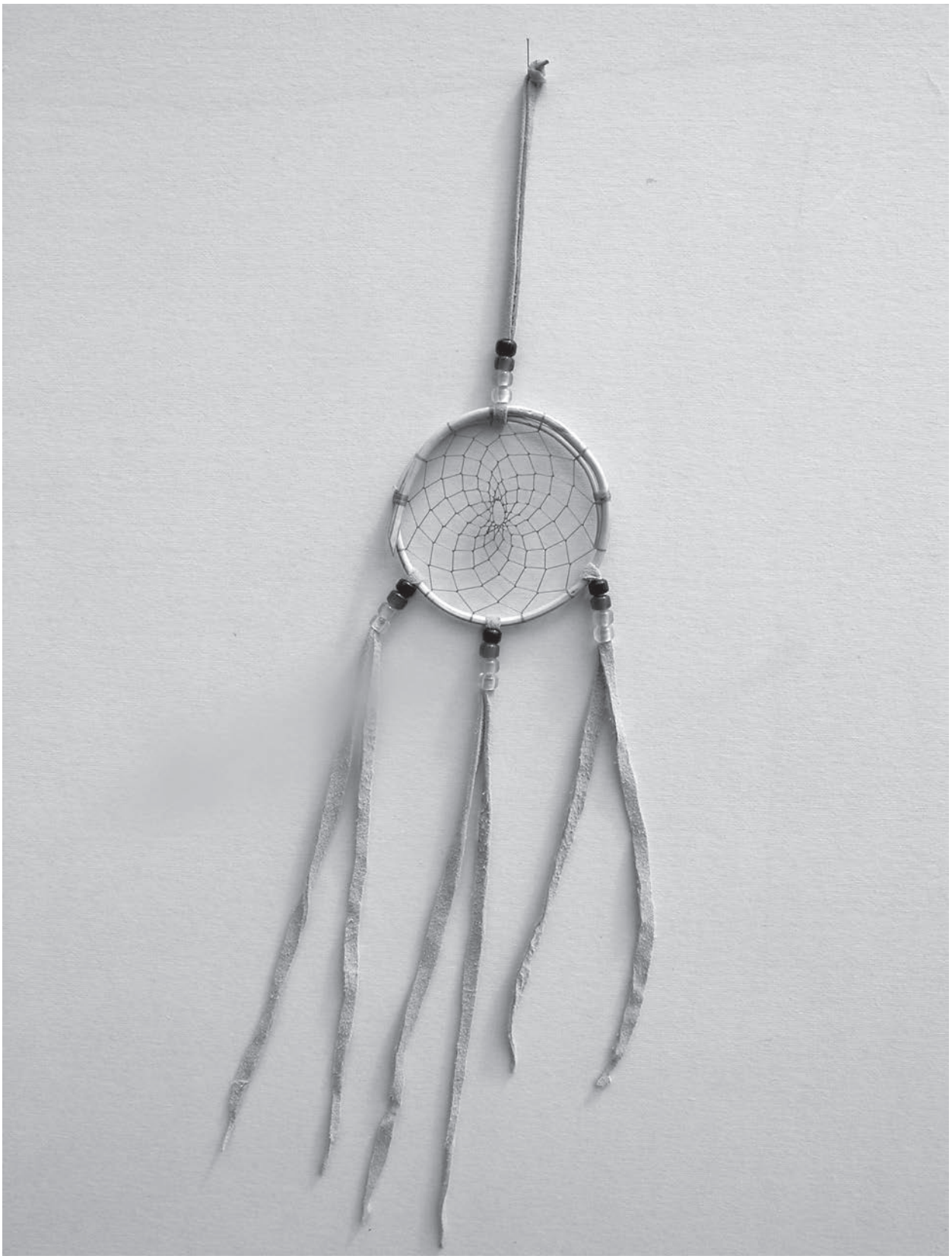

Figure 3. Scraped chokecherry branch wall-hanging produced by a Lakota craft worker and offered for sale at an outdoor craft booth near Wounded Knee, Pine Ridge Reservation, 2013.

TABLE 2. Number of cups consumed of selected wild fruits in a typical year

Participant name and number	Buffaloberry	Currant	Chokecherry	Grape	Plum	Rose
1 Cornelia White Feather	0	2 (F)	5 (F)	5 (F)	5 (F)	0
2 Carole A. Provencial	0	0	8 (F)	1 (F)	4 (F)	0
3 Byron Provencial	0	2 (F)	12 (F)	0	6 (F)	0
4 Melvin Guerue	12 (T)	6 (T)	6 (T)	6 (F,T)	6 (T)	6 (T)
5 Anonymous	1 (F)	1 (F)	10 (F,B)	1 (F)	4 (F,M)	2 (B)
6 Michael White Buffalo Chief	2 (F,B)	2 (F,B)	3 (F,B,M)	4 (F)	10 (F,B,M)	1 (F,B)
7 Anonymous	4 (F)	6 (F,M)	12 (F,B,M)	5 (F,B)	12 (F,M)	2 (B)
8 Sidney Reddest Jr.	2 (F)	3 (F)	12 (F)	0.5 (F)	6 (F)	0
9 Leston Brewer	2 (F)	0	2 (F)	2 (F,B)	1.5 (F)	0
10 Keith Murray	5 (F)	5 (F)	9 (F)	2 (F)	0.5 (F)	0
11 Nicol Burow	0	0	2 (F)	0	1 (F)	0
12 Maria Iyotte	0	4 (F,B)	2 (F,B)	0	4 (F)	0
13 Leana Long Pumpkin	2 (F,B)	2 (F)	80 (F,B,T,M)	80 (F)	16 (F)	2 (B,T,M)
14 Carol Black Elk	4 (F)	4 (F)	2 (F,B,M)	2 (F)	1 (F)	2 (B,M)
15 Nellie Eagleman Black Owl	2 (F)	1 (F)	2 (F,B)	0	3 (B)	2 (F)
16 Stanley Little Thunder	5 (F)	2 (F)	5 (F,B)	2 (F,B)	4 (F)	0
17 Sam High Crane	1 (F,M)	4 (F,M)	6 (F,B,M)	0.5 (F,M)	12 (F,M)	0
18 Anonymous	100 (F)*	100 (F)*	16 (F)	0	80 (F)	16 (F)
19 Anonymous	4 (F)	0	8 (F)	0	8 (F)	0
20 Anonymous	1 (F)	0	8 (F)	0	3 (F)	0
21 Altine Black Lance	5 (F)	5 (F)	5 (F)	5 (F)	5 (F)	10 (B)
22 Sylvan White Hat Jr.	0	0	6 (F)	0	6 (F)	0
23 Anonymous	0	0	5 (F)	0	5 (F)	0
24 Larry Black Lance	1 (F)	0	1 (F,M)	1 (F)	3 (F)	0
25 Aloysius Running Horse	1 (F)	1 (F)	30 (F,B)	0	30 (F)	0
26 Clayton High Pipe	3 (F)	0	16 (F,M)	1 (F,M)	10 (F,M)	0.5 (T)
27 Greg P. Quigley	16 (T,M)	4 (T,M)	16 (T,M)	0	32 (T,M)	64 (T,M)
28 Anonymous	0	0	150 (F)	0	150 (F,B,M)	1 (B)
29 Audrey Bear Dog	4 (F,B,T,M)	8 (F,B,T,M)	80 (F,B,T,M)	16 (F)	32 (F)	0
30 Anonymous	8 (F)	16 (F)	16 (F)	2 (F)	16 (F)	0 (F,B)*
31 Delores Kills In Water	0	0	4 (F,B)	0	12 (F)	0
32 Violet Little Elk	1 (F)	1 (F)	1 (F)	1 (F)	1 (F)	0
Mean	2.77*	2.55*	16.88	4.28	15.28	3.39
Standard deviation	3.59*	3.30*	30.19	13.94	28.45	11.38

Notes: Uses indicated by F = fruit, B = beverage, T = tonic, and M = medicine.

*Means and standard deviations do not include participant number 18 for buffaloberry and currant as outliers, nor participant 30, who reported rose used, but too small to estimate as a fraction of a cup.

> it would be plum *wojapi* [pulverized meat and fruit]. I don't remember those foods being served at funerals that I attend. —Aloysius Running Horse, 2012 (Kant 2013, 189)

> I am 38 years old. . . . My mom showed me how to make bread and other *wojapi* with canned stuff, like peaches and canned blueberries. . . . It is okay to make the *wojapi* with store fruit for a funeral, for example. I think it's important to pass it on to future generations. —Anonymous #20, 2012 (Kant 2013, 181–82)

> I pick and dry red rosehips to make tea. My relatives use the rosehips for *wojapi* (pudding). I don't pick rose leaves for tea or have an interest in them. When drying the rosehips, I pound them with a hammer. I steep the crushed rosehips (including their seeds) in hot water, strain the tea, and drink the beverage. —Carolyn Black Elk, 2012 (Kant 2013, 167)

In analyzing the stories of interviewees, several themes emerged for the role of wild fruits. Presented below, the themes included loss of tradition, physical and cultural survival, and economic uses.

In the following two quotations, interviewees express the concern about loss of traditions associated with the wild fruits of interest.

> There are a lot who don't pick the fruits, turnips, or other plants—or prepare them anymore. It's important to take the time to do it and make it fun. —Cornelia White Feather, 2012 (Kant 2013, 140)

> We haven't had many chokecherries or buffaloberries lately. There are cattle all over the place where we used to pick them. The cattle harm the trees and step on the young branches. —Delores Kills In Water, 2012 (Kant 2013, 201)

Interviewees stated their opinions, below, about the probable importance of the fruit traditions as aspects of tribal identity, cohesion, and embeddedness, as well as cultural and physical survival.

> It helps us to take our culture and keep it, in the same way that language and ceremonies do. I would like to bring back a woman's society where we'd teach young girls to be women. They would go through a rite of passage. "If we don't harvest, our plants will go away." A medicine man told me that. —Leana Long Pumpkin, 2012 (Kant 2013, 166)

> It is really important to keep for our traditions. If you don't know how to live off the land, it's a waste. It's as important as language and native religion because our grandmothers and mothers had those traditions. —Anonymous #23, 2012 (Kant 2013, 187)

> I think the wild plants work as a medicine. My great-grandmother told us that all the flowers and fruits are medicine. So throughout the whole year, that's why they preserve all these, so that they can use them through winter. When my great-grandmother took water from a stream, she took some in her hand and put in on the ground and asked that the plants could grow and that we could grow strong. I live through those kinds of beliefs. . . . Lakota does not have a religion. It is a way of life. . . . I used to do public service announcements on the radio during a period of high suicide rates on the reservation. I got on the radio and did a talk show about our way back when I was a little kid. I was trying to give kids their identity, so they wouldn't be committing suicide. I talked about things they could be proud of and who they were. That was about six years ago in 2006. —Sam High Crane, 2012 (Kant 2013, 175–77)

> I am 45 years old. I don't know how to put this, but when I was growing up on the reservation, I had nothing in my life, not even electricity. We just had a wood stove. We cooked fish, turtles, and frogs, and we collected all the berries we could see. They were energy. We needed the food. It was survival. . . . Then I learned to make *gabubu* [skillet] bread, fry bread, *wojapi* (pudding), *wasna* [pulverized meat and fruit mixture], jelly, and jam. She [Mother] said to me, "You are going to be a man someday and have to take care of your family. You need to know that." . . . I would choose to go through my early life experiences again, because the experience brought me intuition and taught me how my mind works and how life really is. —Clayton High Pipe, 2012 (Kant 2013, 191–92).

> My grandma, Lucy Bear Shield, and my grandpa, Thomas Red Bird, taught me what to do with traditionally edible fruits. Presently, I am 48 years old. When I was four, they taught me about how healthy these fruits are. They took me along picking berries. They taught me how to process them, because they did that. I learned from them about the ways of long ago. When my mom was alive, she taught

me and said, "Don't lose those traditions, or you will lose your life." I didn't give them up. —Greg Quigley, 2012 (Kant 2013, 192)

I use these fruits because I did it when I was young. . . . It provides cultural identity. Now that I stand back and look at it, it was special. When I was young, it was just fun. I think it's important to save and teach these things so they don't disappear. My children need to pass them on. This is how we lived off the land. Should times get really hard, we can take these and eat them and live. The idea is that Mother Earth feeds us, rather than the supermarket. We have these resources here as part of the land. —Carole A. Provencial, 2012 (Kant 2013, 140–41)

I took a Lakota botany class at Sinte Gleska school, and we talked about the different plants and harvesting seasons. . . . I am trying to learn the answers and how to teach the reasons for the young today who question our way of life. —Leana Long Pumpkin, 2012 (Kant 2013, 164–65)

Part of being involved in these fruits is keeping my culture. . . . I do a lot of public service announcements for the university [Sinte Gleska]. I translate to Lakota and put it on the air. —Sylvan White Hat Sr., 2012 (Kant 2013, 185–86)

I would miss it if the tradition were lost. I have eaten it since I was a small child. It would be strange to go to a funeral without seeing traditionally edible fruit dishes served. At a ceremony, I would expect to see it. Some examples would be the Sundance, powwows, and traditional weddings. *Wasna* is the mourning food for the Native American Peyote Church. —Byron Provencial, 2012 (Kant 2013, 143)

I was told a traditional Lakota story about chokecherries, wild roses, and Iktome [the trickster]. The point of the story is that when people sometimes tell you things to help, you should listen, because they are telling the truth to help you avoid pain. —Sam High Crane, 2012 (Kant 2013, 174)

Interviewees discussed wild fruits in the local economy in the following quotations.

The fruits could be for sale here at the Rosebud Fair. Sometimes they offer chokecherries, plums, or turnips. . . . Five gallons of chokecherries would be about twenty-five dollars. The plants are not cultivated. They grow wild. —Sidney L. Reddest Jr., 2012 (Kant 2013, 158)

I was one of the Lakota "Lost Ones." I was adopted as a baby in 1962. My adopted mother is from Prague, Czechoslovakia. . . . I grew up in Austria. . . . I am selling the plum syrup at the Rosebud Fair. I would be interested in expanding the business in a way that would create jobs and product branding on the reservation. —Maria Iyotte, 2012 (Kant 2013, 162–63)

Some would rather have someone else pick and sell them the traditionally edible fruits. It doesn't happen too often because sometimes a person doesn't have the money to buy. . . . If you know someone to pick for you, you can trade yardage of material for it, too, if they will agree. —Delores Kills In Water, 2012 (Kant 2013, 203)

I am 29. . . . The chokecherries are most important emotionally as a brand or symbol of the culture. I would buy chokecherries if I saw them in a grocery store, for example. —Anonymous #19, 2012 (Kant 2013, 180)

Conclusion

Our interviews of community members of the Rosebud Reservation confirmed the continued availability and use of wild fruits. Wild fruits and other plant parts constituted a valuable resource among the Lakota in the past. Our study revealed the continued importance of wild fruits in Lakota culture. Interviewees said that the fruits of interest are not a main staple of their daily diets, but gathering and using them continues as a custom, although less so than in the past.

Generally, the older interviewees on Rosebud Reservation reported more interest in and usage of wild fruits than those younger, although our results showed that the wild fruits are not a major component of the daily diet for most participants of any age. Eighty-five percent of interviewees reported using one or more kind of wild fruits at least once a month. Most interviewees agreed that they expected wild fruits to be served at important events, particularly at wakes, funerals, and spiritual ceremonies. They reported that most ingestion occurs around harvest time in July and August, although many noted eating dried, frozen, and canned wild fruits throughout the year. Interviewees often reported that using wild fruits and other tissues from those plants is intertwined with Lakota spirituality and identity. Partic-

ipants described specific uses as foods, beverages, medicines, and tonics, with limited uses for crafts, utilitarian, and religious paraphernalia.

Interviewees expressed considerable diversity of opinion about the general topic of wild fruits on Rosebud Reservation. That finding among the Lakota on Rosebud Reservation supports the reports by Ruelle and Kassam (2011) among the Lakota on Standing Rock Reservation, and as they suggest, such nonconsensus viewpoints may play an important role in cultural adaptation.

Interviewees gave highly variable estimates of the amounts ingested for each of the fruits of interest, in the most extreme cases by as much as 145.5 cups (34.42 L) per year. Despite highly variable use, the interviewees emphasized the importance of the fruits as an aspect of cultural traditions, tribal identity, cohesion, embeddedness, and survival. A few interviewees ranked the use of wild fruit traditions as being as essential as the survival of Lakota language and ceremonies.

Finally, our results indicated that there may be potential for economic development of traditional wild fruits, since interviewees reported them as a valuable commodity but with limited current sales or bartering. Interviewees reported a desire to purchase traditional fruits and related products if produced locally and made available in reservation stores, and we recommend the topic for future research.

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Joanita M. Kant, Department of Civil and Environment Engineering, South Dakota State University, Brookings SD

Gary E. Larson, Department of Natural Resource Management, South Dakota State University, Brookings SD

Suzette R. Burckhard, Department of Civil and Environment Engineering, South Dakota State University, Brookings SD

Bruce W. Berdanier, School of Engineering, Fairfield University, Fairfield CT

Richard T. Meyers, Department of Journalism and Mass Communication, Tribal Relations Director, Program Coordinator of American Indian Studies, South Dakota State University, Brookings SD

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