Lakota (Buechel 1970: 440, 452; Rogers 1980: 28, 31)
peji sasa okihe tankinkinyan [large red joint grass]
A. gerardii
alternate: *santhuhu okiheton* [jointed santhuhu]

Plains Apache (Jordan 1965: 60)
∂oci.s [red grass]
A. gerardii and *A. scoparius*
alternative: *'a.∂ ohe* [native grass]

Ponca (Gilmore 1919: 68)
hade-zhide [red hay]
A. gerardii

Habitat: In the Black Hills, big bluegrass is located on north and east-facing slopes with deep soil and added moisture (Larson and Johnson 1999:382). It grows at Wind Cave National Park.

Uses: This grass had a number of different cultural associations for tribes in the region.

[medicinal] The Omahas and probably the Poncas as well made a decoction from the grass to treat lethargy and fatigue and to reduce fever (Gilmore 1919:69).

[cosmetic & hygienic] The Kiowa used the stems of *A. saccharoides* to clean their teeth (Vestal and Schultes 1939:13).

[veterinary] The Plains Apaches considered blue grasses to be the most nutritious for their horses (Jordan 1965:62).

[art & manufacture] The Poncas used the thick jointed stems of big bluestem in the construction of their earth lodges (Gilmore 1919:69). For the Plains Apaches, this was the prime material for making sleeping mattresses and also for manufacturing brooms to sweep out the tipi (Jordan 1965: 56). The Lakotas lined this grass on the floor of their tipis to absorb moisture, and they used it for insulation in their moccasins (Red Cloud High School 2001).

[fuel] Plains Apaches used bunches of blue stem grass as tinder to start their fires (Jordan 1965:156).

Aristida longiseta [red three awn]

This warm-season, short grass is occasionally found in the dry grasslands of the southern Black Hills especially in barren and eroded locations, and it is reported at Wind Cave National Park (Pisarowicz 2001g:3). The Lakotas call it *peji takan kaza* (Buechel 1970:440; Rogers 1980: 8).

Bouteloua spp. [grama]

Three species of the warm-season, short grama grass are located in the Black Hills: *B. curtipendula* [sideoats grama], *B. gracilis* [blue grama], and *B. hirsuta* [hairy grama]. This was an important group of grasses for bison.

Names:

Kiowa (Vestal and Schultes 1939: 14)
son-pa-pa [no translation given]
B. hirsuta

Lakota (Buechel 1970: 439, 544; Rogers 1980: 28, 31)
wapaha kamnimnila peji [banner waving in wind]
B. curtipendul
peji okijata [forked grass]
B. gracilis
possible alternate: *peji hinkpila* [fur grass]

Habitat: Sideoats grama is common in a wide range of upland habitats in the Black Hills, including the dry prairies and pine savannas of the foothills (Larson and Johnson 1999:384). Blue grama is found in most of the Black Hills' dry grassland habitats, and it is a primary species of shortgrass and mixed-grass prairie environments found at Wind Cave National Park (Larson and Johnson 1996:386; Pisarowicz 2001g:2). Hairy grama, also located in the park, is largely confined to the sandy or rocky grassland soils of the foothills (Pisarowicz 2001g: 3).

Uses: Only the Lakotas, Kiowas, and Plains Apaches are reported to have had uses for these grasses.

[medicinal] Plains Apaches used sideoats grama in a medical procedure to remove cataracts from the eyes (Jordan 1965:105)

[veterinary] The Kiowas reported that *B. curtipendula* and *B. hirsuta* were good fodder for horses (Vestal and Schultes 1939: 14).

[symbolic & ceremonial] The Kiowas believed that sideoats grama resembled a lance decorated with feathers, and so it was worn by warriors who killed an enemy with a lance (Vestal and Schultes 1939:14). Young Lakota women searched for four-headed spears of grama grass to bring them good fortune in love and romance (Hassrick 1964: 241).

***Bromus* spp.**
[Brome]

There are many different brome species in the Black Hills, including *B. anomalus* [nodding brome], B. carinatus [mountain/ California brome], and *B. inermis* [smooth bromegrass], and many of them are excellent forage (Larson and Johnson 1999: 388, 390,392). *B. communitatus* [hairy chess/ meadow brome] and *B. tectorum* [cheatgrass], however, are the only ones listed at Wind Cave National Park (Pisarowicz 2001g:2-3). The only native name reported for a brome grass is *peji hanskaska* [long grass] (Buechel 1970:439; Rogers 1980: 390), a name which refers to the smooth brome grass introduced to the region from Europe.

Buchloe dactyloides
[buffalograss]

Buffalo grass, which provides excellent forage for bison, is found in the foothills and lower elevations of the Black Hills, including Wind Cave National Park, where it appears in mixed grass and shortgrass prairie environments (Larson and Johnson 1999: 382; Pisarowicz 2001g: 3). The Lakotas call this warm-season grass, *peji iwicakoyaka* [grass that sticks to people's clothes] (Buechel 1970:439) or *sipa wicakase* [getting tangled in people's toes] (Ibid: 455).

***Calamagrostis* spp.**
[reedgrass]

C. canadensis [bluejoint reedgrass] is found in wet habitats at mid to high elevations, while *C. purpurascens* [purple reedgrass] is restricted to the open pine and spruce forests of the Harney Range (Larson and Johnson 1999: 394). Neither of these grasses is mentioned in ethnobotanical sources for the tribal nations of the region, although Dilwyn Rogers (1980:31) suggests that the Lakota name *peji okihe toto* [grass with blue joints] may refer to *C. canadensis.* Neither of these grasses is reported at Wind Cave National Park.

Calamovilfa longifolia
[prairie sandreed]

This warm-season, tall grass is most frequently found in the sandy or gravelly soils of mixed grass prairies at lower elevations in the Black Hills, including the area of Wind Cave National Park (Larson and Johnson 1999:396; Pisarowicz 2001g:3). The Lakotas knew it as *santuhu hcaka* [like the grass santuhu], and they used the culms to clean their pipes. Crazy Horse, the famous Oglala war leader, wore the top of this grass on his head as a *wotawe* [war charm] instead of a feather (Buechel 1970:452),

Catabrosa aquatica
[brookgrass/water whorlgrass]

No ethnobotanical information was found on this grass, which is located occasionally at higher elevations in the northern and central Black Hills (Larson and Johnson 1999:396).

Cenchrus longispinus
[mat sandbur]

This grass is especially common at lower elevations in the southern Black Hills (Larson and Johnson 1999:398), although it is not listed among the grasses at Wind Cave National Park (Pisarowicz 2001g: 1-6). The Lakota call it *peji unkcela* [cactus grass] (Buechel 1970:440; Rogers 1980: 29).

Dactylis glomerata
[orchardgrass]

This tall grass was introduced from Europe and grows on park lands. It is now common in a wide range of environments in the Black Hills (Larson and Johnson 1999: 398). There is no information about it in ethnobotanical sources.

Danthonia spicata
[poverty oatgrass]

Several *Danthonia* species are found in the Black Hills (Larson and Johnson 1999:400), but only one is identified at Wind Cave National Park, *D. spicata* [poverty oatgrass] (Pisarowicz 2001g:2). There is no documentation, however, on this mid cool-season grass in ethnobotanical sources.

Deschampsia caespitosa
[tufted hairgrass]

This uncommon grass is confined to the mid elevations of the northern and central Black Hills (Larson and Johnson 1999:400), and it is also not reported in the ethnobotanical literature.

Dichanthelium oliosanthes
[Scribner dichanthelium]

Several varieties of the cool-season dichanthelium are reported in the Black Hills, where they frequently appear in the area's grasslands and open forests (Larson and Johnson 1999: 402). Wind Cave National Park is apparently not one of the locations where it grows, however. In Lakota, this grass was called *peji wakan* [sacred grass] (Buechel 1970: 440; Rogers 1980:30). The Lakotas believed that it had a toxic effect on horses, but according to Larson and Johnson (1999: 402), there is no evidence to support this idea. The Kiowas, however, viewed this as a palatable and nutritious grass to fatten their horses (Vestal and Schultes 1939:16).

Distichlis spicata
[inland saltgrass]

Although not reported for the Black Hills, saltgrass is widespread in the Plains region where it typically grows in alkaline or saline soils (Johnson and Larson 1999:30). The Lakotas knew it as *peji suksuta* [tough grass] (Buechel 1970:440; Rogers 1980:29).

Echinochloa muricata
[rough barnyardgrass]

Also known as wild millet, barnyard grass is a common warm-season grass throughout the Great Plains where it typically occupies cultivated fields, ditches, and feed grounds (Johnson and Larson 1999:32). It is one of the grasses listed for Wind Cave National Park (Pisarowicz 2001g: 2). The Lakotas call *E. crusgalli*, the European variety, *peji'skuya* [sweet grass] (Buechel 1970:230; Rogers 1980:29).

***Elymus* spp.**
[wildrye]

E. caandensis [Canada wildrye], *E. elymoides* [squirreltail], *E. glaucus* [blue wildrye], *E. trachycaulus* [slender wheatgrass], *E. villosus* [hairy wildrye], and *E. virginicus* [Virginia wildrye] are the wildrye species reported in the Black Hills by Larson and Johnson (1999:402-408).

Names:

Comanche (Carlson and Jones 1939: 521)
puitsaseni [no translation given]
E. canadensis

Lakota (Buechel 1970: 449; Rogers 1980: 29)
pteya hota [cow makes it gray with mouth]
E. canadensis

Habitat: Cool season wildrye species occupy a wide range of habitats in the Black Hills, but many are occasional in their appearance or restricted to specific regions. The Canada wildrye, which is the only one named in native nomenclatures, is commonly found over the entire area in open grassland habitats and along stream banks, including at Wind Cave National Park (Larson and Johnson 1999:402; Pisarowicz 2001g: 2).

Uses: Only the Cheyennes are reported to have had uses for any of the wildrye species.

[art & manufacture] Cheyennes also used *E. cinereus* to make a black dye (Hart 1981:28).

[symbolic & ceremonial] The bedding for various Cheyenne ceremonies was made out of *E. cinereus* (not reported in the Black Hills) because it was known to help cool the dancers (Hart 1981:8).

Eragrostis cilianensis **[stinkgrass]**

The warm-season stinkgrass, although introduced from Europe, is common in the northern Plains (Johnson and Larson 1999: 38), and it is found at Wind Cave National Park too (Pisarowicz 2001g: 3). The Lakotas named it *peji sicamna* [bad smelling grass] (Buechel 1970:440; Rogers 1980: 29).

Hierochloe odorata **[sweetgrass/vanilla grass]**

Sweetgrass is not reported in the Black Hills nor is it mentioned in Larson and Johnson's book on the grasses and plants of South Dakota, even though it is widely present in the northern and central plains. This plant is highly sacred to the tribal nations of the region, and it is widely traded by them as well.

Names:

Cheyenne (Hart 1981:9)
ve?ho?otsetse [no translation provided]

Kiowa (Vestal and Schultes 1939:15)
an-son-a [no translation offered]

Lakota (Buechel 1970: 440, 512; Rogers 1980: 30)
peji wacanga [sweetgrass]
alternative: *wacanga*

Ponca (Gilmore 1919: 66)
pezhe sonsta [no translation given]

Uses: Sweetgrass is one of the most important sacred plants used by the Lakotas and other tribal nations in the northern Plains for ceremonial purposes.

[cosmetic & hygienic] Kiowas wrapped the grass with articles of clothing to give them a sweet smell, and they also stuffed it in pillows and mattresses (Vestal and Schultes 1939:15).

[symbolic & ceremonial] Kiowas burned it as incense in many of their ceremonies (Vestal and Schultes 1939: 15). In Cheyenne creation stories, sweet grass is mentioned as the first plant the creator laid down when he made this world, and it is also a plant that Sweet Medicine, the Cheyenne's culture hero, burned to purify the world (Hart 1981: 9). It remains an important ceremonial incense in the Cheyennes' Sacred Arrow and Sacred Hat ceremonies, in the Sun Dance, in protecting warriors and contraries before they entered battle, in healing rituals, and in warding off evil influences in homes (Hart 1981:9-10).

The Lakotas use it in many different ceremonial contexts too. Indeed, it is ubiquitous in these contexts because the Lakota believe

that its smell pleases the spirits, and as a result, it is used whenever the spirits are petitioned for assistance (Buechel 1970: 512; Walker 1980:113,119). For the Lakotas, sweet grass attracts good spirits, while sage repels evil ones (Gilmore 1919: 66). It is used in consecrating a pipe and in praying with a pipe (Walker 1980:76-77, 81, 83, 87, 89), in seeking visions (Walker 1980: 86), in birthing (Hassrick 1964: 271), in the ceremonies performed by *wicasta wakan* (Hassrick 1964: 249; Walker 1980:94-95), in the adoption rituals of the *Hunka* ceremony (Walker 1980:194, 197, 202, 209, 210, 214, 228-230, 235), in the Sun Dance (Sword in Deloria 1929; Hassrick 1964:244; Walker 1980:184), the *Omaha wacipi* (Hassrick 1964:266), the *Pte San Lowampi* (Fletcher 1887c; Hassrick 1964: 266; Walker 1980:244-245, 247-248, 251), the Elk ceremony (Fletcher 1983b), Spirit Keeping ceremonies (Hassrick 1980: 262), and the rituals surrounding eagle-trapping (Standing Bear 1988:79). Historically, the wand used in the dances of the White Badges was decorated with sweet grass (Walker 1980:263), and it was attached to the armlets of *Tokala* [Kit Fox] society members (Walker 1980: 273). It is mentioned in the story of the White Buffalo Calf Woman, where it represents a tangible sign of Wohpe's benevolence (Hassrick 1964: 215; Walker 1980:111,221). In mod-ern times, sweet grass continues to be used in a variety of ceremonial contexts including *Yuwipi* (Kemnitzer 1970:66). The Poncas used it in their *Wawan* ceremony (Gilmore 1919:66).

Festuca saximontona
[Rocky Mountain or sheep fescue]

This grass is common at higher elevations in the northern and central Black Hills (Larsen and Johnson 1999:410). Although it is not listed at Wind Cave National Park, another related variety, *Festuca/Vulpia octoflora* [sixweeks fescue] is reported at the park (Pisarowicz 2001g: 3). Neither of these is mentioned in the ethnobotanical literature.

Glyceria grandis
[American mannagrass]

This grass is occasionally located in the shallow waters and exposed muds of streams and ponds in the Black Hills (Larsen and Johnson 1999:412). There are no reports on it in ethnobotanical sources.

Hordeum jubatum
[foxtail barley]

Foxtail barley is commonly found at low to mid elevations along stream margins and in moist meadow habitats, including those at Wind Cave National Park (Pisarowicz 2001g:2). Its forage value is very low, and it is also avoided by many animals because of the abrasive effects of its awns (Larson and Johnson 1999:412). The Lakotas call this cool-season grass by several different names, including: *ite asiniyanpi* [tickle face], *peji ite'on asiniyakiyapi* [one uses it to tickle the face], and *peji' jiji* [light colored grass] (Buechel 1970:239, 439, 823; Rogers 1980:30).

***Koeleria* spp.**
[Junegrass]

Junegrass is very common in the Black Hills where it is found in mixed and shortgrass prairie habitats, meadows, open forests, and scrublands; (Larson and Johnson 1999: 414). It grows at Wind Cave National Park too (Pisarowicz 2001g:2). This is a highly nutritious cool-season grass, and one that many animals, including bison, elk, and deer favor (Larson and Johnson 1919:414). The Cheyennes are the only tribal nation who are reported to have named and used it, but given its sacred importance to them, it probably had significance to the Lakotas too. The Cheyenne name is *naaseto-vo?estse* [sacred plant]. The Cheyennes regarded this as a highly significant plant whose flowering culms were used in the Sun Dance to give the dancers strength. The grass also served as a brush to apply paint to the dancers, and it was applied in a medicinal mixture to treat

cuts and abrasions (Hart 1981:10; Whiteman in Schwartz 1988: 53).

Melica bulbosa **[oniongrass]**

This is an uncommon grass in the Black Hills where it is restricted to moist rocky slopes or open forests in the northern Hills (Larson and Johnson 1999: 416); it is not listed at Wind Cave National Park. No records on its cultural use are found in the ethnobotanical literature.

Muhlenbegia racemosa **[green muhly]**

This warm-season grass is frequent in a variety of environments throughout the Black Hills (Larson and Johnson 1999: 416). This and the related variety *M. cuspidata* [Plains mushy] are found at Wind Cave National Park (Pisarowicz 2001g 2-3). No information was found on their tribal names or cultural associations in ethnobotanical sources.

Oryzopsis **spp. [ricegrass]**

Three species of ricegrass are reported in the Black Hills: *O. asperifolia* [roughleaf ricegrass], *O. hymenoides* [Indian ricegrass /Swallen's needlegrass], and *O. micranthum* [littleseed ricegrass]. The first is common in the forest areas of the central and northern Black Hills, while the second is found occasionally in the lower elevation dry grassland environments of the Hogback and Red Valley (Larson and Johnson 1999: 418). The third one is commonly located in open forest habitats (Larson and Johnson 1999: 420). Only the first two of these cool-season grasses are found at Wind Cave National Park, however (Pisarowicz 2001g: 2). Although ricegrasses were widely taken as food by tribal nations in the Southwest and Intermountain West (Kindscher 1992: 232-233), there are no reports of such use for tribes in the Plains. Nor is there any other information on them for the tribal nations who lived among the Hills. These varieties of grass are reported to be excellent forage for wildlife, and one of them, the rough-leaved variety, also keeps its green leaves through the winter -- a fact that may have had symbolic significance for local tribes.

Panicum virgatum **[switchgrass]**

This tall, warm-season grass is common throughout the plains of South Dakota (Johnson and Larson 1999: 48). In the Black Hills, it is found at lower elevations in grassland and open forest environments (Larson and Johnson 1999:420) and at Wind Cave National Park (Pisarowicz 2001g: 2). The Lakotas knew it as *peji blaskaska* [flat grass] (Buechel 1970:439), while the Poncas called it *hade wathazhninde* [no translation given] (Gilmore 1919:66). *P. capillare* [witchgrass] was called *ite awicasniyan hu* [plant that tickles the face] (Buechel 1970: 239; Rogers 1980:30).

Pascopyrum smithi **[western wheatgrass]**

This cool-season grass is common on sedimentary valley floors in the Black Hills where it grows in a wide range of dry to wet grassland habitats (Larson and Johnson 1999: 422). It is not reported at Wind Cave National Park. The Lakotas knew it as *peji hcaka* [real grass], and they said that when it is tall and abundant, the horses eat only the part that the snow has not reached (Buechel 1970:439; Rogers 1980: 27).

Phalaris arundinacea **[reed canarygrass]**

Located at Wind Cave National Park, this tall, cool-season grass grows at the edge of low elevation streams, ponds, and lakes throughout the Black Hills (Larson and Johnson 1999:422; Pisarowicz 2001g:2).

There is no information on it in the ethnobotanical literature we consulted.

Phleum pratense **[timothy grass]**

This widely used forage grass was introduced to the Black Hills and Wind Cave National Park from Europe, and it is found in meadows, pastures, and roadsides (Larson and Johnson 1999: 424; Pisarowicz 2001g: 2). There is also no documentation on this grass in ethnobotanical sources.

Poa **spp. [bluegrass]**

There are several different varieties in this family of cool-season grasses listed in the Black Hills in a wide range of habitats (Larson and Johnson 1999:424-432). Six different varieties are reported at Wind Cave National Park: *P. arida* [plains bluegrass], *P.sandbergii/secunda* [Sandberg's bluegrass], *P. compressa* [Canada bluegrass], *P.canbyi* [Canby's bluegrass],* *P. interior* [inland bluegrass], and *P. pratensis* [Kentucky bluegrass] (Pisarowicz 2001g: 3) With the possible exception of Kentucky bluegrass, which has a second period of growth in the fall and good forage for wildlife, most of the other species do not have good grazing potential (Larson and Johnson 1999:424-432; Johnson and Larson 1999:58). None of these varieties are named or described in ethnobotanical sources for the tribal nations in the region.

Pseudoroegeneria spicata **[bluebunch wheatgrass]**

This grass is local to the Black Hills, where it is found on sandstone ridges and dry slopes in the western regions of the Hills (Larson and Johnson 1999: 432). It is not listed among the grasses at Wind Cave National Park. There are no data on this cool-season grass in ethnobotanical sources.

Schedonnardus paniculatus **[tumble grass]**

This grass is not reported in the Black Hills but it is very common in the surrounding Plains, especially in open prairies and near prairie dog towns (Johnson and Larson 1999: 62). The Lakotas knew it as *wabluska hua ota peji* [many insect legs grass] (Buechel 1970:512; Rogers 1980:30).

Schizachne purpurascens **[false melic]**

Another grass, also not described in ethnobotanical sources, false melic is common in the moist forest habitats of the Black Hills (Larson and Johnson 1999:432). It is not reported at Wind Cave National Park.

Schizachyrium scoparium **[little bluestem]**

This was one of the warm-season grasses that were valued by Plains Indians for its medicinal and spiritual properties.

Names:

Comanche (Carlson and Jones 1939:520)
ekonip [no translation given]
A. scoparius

Lakota (Buechel 1970: 440,452; Rogers 1980:28,31)
peji sasa swula (small red grass)
A. scoparius
possible alternate: *peji sasa* [red grass]

Plains Apache (Jordan 1965: 60)
∂oci.s [red grass]
A. gerardii and *A. scoparius*
alternative: *ʻa.∂ ohe* [native grass]

Ponca (Gilmore 1919:16)
hade-zhide (red hay)
A. scoparius

Habitat: Little bluestem is a common grass in the mixed grass prairies and dry open forests of the Black Hills (Larson and Johnson 1999:434).

Uses: Plains Indians relied on this grass for many different purposes.

[medicinal] Omahas and probably Poncas made a decoction of the lower blades of little bluestem [*A. scoparium*] to treat lethargy of unknown origin, and they also took it to treat fever (Gilmore 1919:16). The Comanches are reported to have used ashes made from this grass to treat syphalitic sores (Carlson and Jones 1939:520).

[veterinary] The Plains Apaches considered little bluestems to be the most nutritious for their horses (Jordan 1965:62).

[art & manufacture] The Lakotas processed the dried culms and leaves of little bluestem into soft fibers to line and insulate their moccasins in winter (Buechel 1970: 440).

[fuel] Plains Apaches started their fires with tinder made from bunches of bluestem grass (Jordan 1965:156).

[symbolic & ceremonial] The Comanches and the Plains Apaches made bundles of little bluestems into switches that they used to cure bodily pain and drive away evil spirits in their sweat lodges (Carlson and Jones 1939:520; Jordan 1965:98).

Sorghastrum nutans (avenaceum) **[Indiangrass]**

Indiangrass is more typical of the tall grass prairies east of the Missouri It is an uncommon grass in the Black Hills where it is found primarily along low elevation roadsides and drainages on the Hills' eastern edges, including locations in Wind Cave National Park (Larson and Johnson 1999: 434; Pisarowicz 2001g: 2). It offers high quality forage prior to flowering in late summer. The Lakotas knew it as *peji sasa inkpa jiji* [red grass with fluffy light-colored end] (Buechel 1970:440; Rogers 1980:30). The Kiowas called it *son-ton-pa* or *son-ka* [no translations given], and they considered this an excellent fodder for their horses (Vestal and Schultes 1939:16).

Spartina pectinata **[prairie cordgrass]**

Prairie cordgrass is very common in the Black Hills, and it is located at low to mid elevations along streams and in wet meadows, including locations at Wind Cave National Park (Larson and Johnson 1999: 436; Pisarowicz 2001g:2). The Lakotas knew it as *santuhu tanka* [large santuhu], but it may also have been known as *iwila tapeji* [a spring's grass] (Buechel 1970:452,831; Rogers 1980:31). This and related varieties of *spartina* were used by the Poncas as thatching for the roofs of their earth lodges (Gilmore 1919:66) and by early European American settlers as thatching for their sod houses (Larson and Johnson 1999:436).

Sporobolus **spp. [dropseed]**

Three species of dropseed are identified in the Black Hills: *S. asper* [tall dropseed], which is uncommon, and *S. cryptandrus* [sand dropseed], which is frequent in occurrence. Both are among the warm-season grasses found at Wind Cave National Park. *S. heterolepis* [prairie dropseed] is also frequent, but it occurs only at higher elevations in open pine forests and meadows (Larson and Johnson 1999: 436-438; Pisarowicz 2001g: 2). The Kiowas knew sand dropseed to be an excellent fodder for their horses (Vestal and Schultes 1939:17). The Lakotas called it *peji takan* [sinew grass] because of its toughness (Buechel 1970: 440; Rogers 1980: 31).

Stipa/Hesperostipa **spp. [needlegrass]**

Three of the five different stipa species reported in the Black Hills are found at Wind Cave National Park (Larson and Johnson 1999: 440-444): these are *Stipa/ Hes-*

perostipa comata [needle and thread]. *Stipa /Hesperostipa spartea* [porcupine-grass], and *Stipa/Nassella viridula* [green needle-grass]. Only porcupine grass has been described in the ethnobotanical literature, however.

Names:

Lakota (Buechel 1970: 336; Rogers 1980: 31)
micapeca [to stab or pierce]

Ponca (Gilmore 1919: 66)
mika-hi [comb plant]

Habitat: In the Black Hills, *S. comata* is typically found in mixed prairies at lower elevations in the Hills, while *S. spartea* is commonly found in moist grassland and open forest habitats. *S. nassella* appears in a wide variety of environments from mixed grass prairies to open forests (Larson and Johnson 1999: 441-443). All three are reported at Wind Cave National Park (Pisarowicz 2001g:3).

Uses: Porcupine grass was used primarily to make brushes for utilitarian and ceremonial purposes.

[cosmetic & hygienic] After binding them into a bundle, the Poncas burned the pointed grains to make brushes for combing the hair (Gilmore 1919: 67).

Cyperaceae
The Sedge Family

Carex spp.

More than twenty different species of this subfamily are located in the Black Hills (Larson and Johnson 1999: 448-466), but only one of them has been documented in ethnobotanical sources. *C. nebrascensis* [Nebraska sedge] is frequently found in wet habitats at low elevations in the Black Hills (Larson and Johnson 1999:148), and it is known as *mehne-mehno?estse* [serpent or dragon plant] in Cheyenne (Hart 1981:7). The Cheyennes believed that this sedge lived in waters that serpents inhabited, and they placed it in the cavities of a buffalo skull during their Sun Dance and Massaum ceremonies (Hart 1981:7). It was also inserted in the cavity of a yellow-faced wolf skull during the Massaum ceremony (Hart 1981: 8-9). Symbolically, its use represented a prayer for an abundance of water and the growth of vegetation (Hart 1981:9). Another *Carex* species, *C. gravida* [heavy sedge], not reported in the Black Hills, was called *peji psunpsunla* [flexible, loose, fallen-out weed] by the Lakotas (Buechel 1970:439; Rogers 1980: 26). Standing Bear mentioned an unidentified sedge with long, jointed roots that was used to treat nervousness. He wrote:

> Though very bitter, this medicine was a favorite with the women, who often wore a piece of it around their necks. It was also carried by the Duck-Dreamer medicine man, for it was one of the secrets imparted to him by the duck (Standing Bear 1978: 60).

Cyperus spp. [flatsedges]

Although not reported in the Black Hills, various species of flatsedges are found in wetland habitats in regions to the east of the Black Hills (Johnson and Larson 1999: 84). The Lakotas called *C. schweinitzii* [Schweinitiz's flatsedge] *minisantuhu* [water santuhu] (Buechel 1970:336; Rogers 1980: 26). The Kiowas are reported to have used it in medicinal ways (Vestal and Schultes 1939:18). The Plains Apache name for *C. setigerus* [lean flatsedge] is *koya.^'oh* [water grass] or alternatively *wagozaya-dika.de* [it makes a baby skinny]. Apaches consumed the tender white part at the base of the culm, although nursing mothers avoided the plant because they believed it led to weight loss in their infants (Jordan 1965:31).

Eleocharis erythropoda **[bald spikerush]**

Several spikerush species are reported in the Black Hills, although *E. erythropoda* is the most common and found in the shallows of wet habitats at low to mid elevations throughout the region (Larson and Johnson 1999:468). There is no information, however, on spikerushes in ethnobotanical sources for the tribal nations who lived in the region.

Schoenoplectus and Scirpus **spp. [bulrushes]**

Several bulrush species are reported in the Black Hills.

Names:

Cheyenne (Grinnell 1972: 2: 170)
mo um' stats [stately plant]

Lakota (Buechel 1970: 439, 446, 542, 584, 824; Rogers 1980: 26-27)
psa [rush]
generic for *S. tabernaemontaini* and *Scirpus*
psa obloton [cornered rush]
S. tabernaemontaini
alternates: *psa swula* [fine rush]
peji'iwicakoyaka [grass that sticks to people's clothes]
psa popopela [pithy rush]
wanyeca [like an arrow]
wihuta hu swula [lower border of tent]
* It is unclear whether or not all of these refer to *S. tabernaemontaini*.

Ponca (Gilmore 1919: 69)
sa-hi [no translation given]

Habitat: *Scirpus pallidus* [pale/cloaked bulrush] is frequently found in low to mid elevation wet habitats (Larson and Johnson 1999:470-472), while *Schoenoplectus pungens* [threesquare bulrush] is common and found at low elevation stream banks and pond edges over the entire Hills (Larson and Johnson 1999:468). *Schoenoplectus tabernaemontaini*, also known as *Scirpus validus* [softstem bulrush], is common at similar elevations in the shallow waters of ponds and streams. It is located at Wind Cave National Park (Pisarowicz 2001j: 2).

Uses: Softstem bulrush was an important source of food and also material for the manufacture of various kinds of mats.

[food] The Cheyennes ate the inner part of the softstem bulrush's stem (Hart 1981:8) and so did the Lakotas (Gilmore 1913b:359; Bordeaux 1929:130). Standing Bear (1978: 58) wrote:

> A food that had an interesting history for us was the tall plant that grew in the swamps, commonly called the bulrush. The duck, who brought many good plants and roots to the tribe, told the Duck Dreamer medicine-man about it and named it psa. In the early spring and summer we welcomed this plant which was pulled up by the roots, and the white part eaten like celery.

[art & manufacture] Melvin Gilmore reports that all of the tribes in the central Plains region used the stems of softstem bulrush to make mats (Gilmore 1919:69). Cheyenne women wove mats that they spread like blankets (Grinnell 1972:2:170-171). The Lakotas did so as well, judging by the names which describe blankets, beds, and tent drops made of rush *psa owinja* [rush blanket] or *psa oyunke* [rush bed] (Gilmore 1913b: 359; Buechel 1970:446). Although Larson and Johnson (1999:469) claim that *S. pungens* was used widely for basket weaving, there is no confirmation in ethnobotanical sources for the tribal nations who lived and traveled in the Black Hills.

[symbol & ceremony] Another bulrush, not reported in the Black Hills, *S. nevadensis* [Nevada bulrush] was used by the Cheyennes to mold the nose and eyes of the buffalo skull placed on their Sun Dance altar. It also went into making a foundation for their beds (Hart 1981: 8).

Juncaceae
The Rush Family

Six species of rush are reported in the Black Hills with varying degrees of occurrence (Larson and Johnson 1999:474-478). *Juncus dudleyi* [wiregrass] is reported at Wind Cave National Park (Pisarowicz 2001j:2). None of these are described in the ethnobotanical literature, although *J. balticus* [Baltlic rush], not reported in the Hills, is named and used by local tribes. It is widely distributed throughout the northern Plains (Johnson and Larson 1999:86). The Lakotas know it as *mak'uzanpi* [it gives good health], and they use it to cure diarrhea (Lewis, T. 1990:134). The Cheyennes call it *ho oma' wishemen oh' to wits* [robe ornamented with quills] or alternately,*hooma-ve?she-meeeno?estovest-se* [for robe ornamenting] (Grinnell 1972: 2:171; Hart 1981:12). Historically, the fine rootlets from this rush's rootstock were applied as ornamentation on robes and other leather products, and its stems were used in basket-weaving as well (Grinnell 1972:2: 171).

FERNS AND HORSETAILS

Although there are more than eighteen different species of spleenwort, fern, polypody, and horsetail located in the Black Hills, only two are widely recognized by the tribal nations who historically occupied the region and both are in the horsetail family.

The vast majority of ferns are located in the central and northern Black Hills, mostly at high elevations, and only a few are common or widespread in their occurrence. The Brittle fern is very common throughout the Hills at all elevations in the shady locations of pine, spruce, and deciduous forests, and so are the Slender lip and Mountain cliff ferns. Venus' hair fern is quite common along Cascade Creek south of Hot Springs (Larson and Johnson 1999:26-38). Tribes outside the region used some of these ferns for a wide variety of medicinal purposes (Tilford 1997:94). Although many of them were no doubt recognized and named in the languages of the tribes who once inhabited the Black Hills, and some of them may have even been used, this information has not been recorded in published ethnographic and ethnobotanical accounts.

Equisetaceae
Horsetail Family

Names:

Cheyenne (Grinnell 1972:2:169; Hart 1981:4)
mo in' a am es se e ohk [elk medicine]
E. hyemale
alternate: *nestoe-hestoto tse heheva?xestse* [his tall tail]
E. arvense

Kiowa (Vestal and Schultes 1939:12)
do'npa [fat plant]
E. arvense

Lakota (Buechel 1970:440)
wanyecahu [stem like a big arrow]
E. hyemale
wanyeca swula [small, fine horsetail]
*E. variegatum**
alternative: *Peju swula* [fine medicine]

Plains Apache (Jordan 1965: 64)
koya ^oh [water grass]
E. hyemale
alternative: *kazolbe'e.side* [resembles cat tail]

Ponca (Gilmore 1919: 63)
mande idhe shnaha [to make a bow smooth]

Habitat: Three members of the horsetail family are common in the Black Hills. *Equisetacea arvense* [field horsetail] is confined to moist habitats in the low to mid elevation regions of the central and northern Hills. *E. laevigatum* [smooth scouring rush] and *E. hymale* [common scouring rush] are found throughout the Hills at the same elevations and in similar habitats. The third, *E. sylvaticum* [wood horsetail] is occasional and restricted to the higher elevation regions of the northern and central Hills (Larson and Johnson 1999:40-42).

Uses: Horsetails were named and used by a number of different tribal nations in the region for a wide range of purposes.

[food] The roots are edible, and the Kiowas are reported to have eaten the swollen base of *E. arvense* (Tilford 1997:76; Vestal and Schultes 1939:12).

[medicinal] While *equisetaceae* are reported to have medicinal uses as diuretics among European American and American Indian herbalists (Tilford 1997), no evidence of such usage has been found for the tribal nations who lived in the Black Hills.

[veterinary] The Lakotas maintain that horses grazed on *E. hymale* have greater stamina (Buechel1970:440). The Cheyennes used it as medicine to treat hard coughs in their horses (Grinnell 1972:2:169).

[art & manufacture] The high silica content of the smooth scouring rush's stems and the closely related *E. hyemale* give them a gritty texture, which was useful to local Indians and early settlers for scouring and polishing (Gilmore 1919: 63; Kindscher 1992: 241-42; Larson and Johnson 1999:42). Field horsetail was used by the Cheyennes to make a dye for porcupine quills, robes, clothing, and lodges (Hart 1981:4), while the Plains Apaches made the plant's hollow stems into toy whistles (Jordan 1965:64).

IV. WOODY PLANTS: TREES, BUSHES, AND SHRUBS

Over eighty different species of woody plants are reported in the Black Hills, with more than two-thirds of these identified by name and/or use in ethnobotanical and ethnographic sources for the tribal nations of the region.

Aceraceae
The Maple Family

Only one species in this family, the box elder, is located in the Black Hills, and historically, it was a very important source of food, fuel, medicine, and manufacturing material for tribes in the region. It was important in the ceremonial life of many tribes as well.

Acer negundo
[box elder]

This tree is widespread in the plains and prairies beyond the Black Hills (Johnson and Larson 1999: 238), and it is one of several trees prized for their sweet sap.

Names:

Cheyenne (Grinnell 1972:1: 249; Hart 1981:13)
mish ke mai' [no translation given]
alternate: *me?eshkemaha*

Kiowa (Vestal and Schultes 1939:40)
kaw-sen-an-daw [no translation provided]

Lakota (Buechel 1970:123; Rogers 1980:32)
cansu'ska [sweet sap tree]

Ponca (Gilmore 1919:101)
zhaba-ta-zho [beaver wood]

Habitat: In the Black Hills, it is located at low elevations along streams and canyon floors in association with green ash, bur oak, and American elm (Larson and Johnson 1999:480), and it is reported at Wind Cave National Park (Pisarowicz 2001f:1).

Uses: This tree was widely used for both practical and spiritual purposes by the tribal nations who inhabited the Black Hills.

[food] Many tribes relied on the tree's sap to make sugar (Gilmore 1919:101). The Hidatsas, Kiowas, Lakotas, and Cheyennes produced sugar from its sap. This was an important productive activity for women during the spring (Gilmore 1913b:366; Grinnell 1972:1:249; Vestal and Schultes 1939:

40; Hassrick 1964:150; Nickel 1974: 57; Standing Bear 1978:59, 1988:98-99; Hart 1981:3, 1992:5). The Cheyennes boiled the sap in a kettle and combined it with shavings from the inner side of hides to make a candy, and they also mixed it with water for a beverage known as *mishke mai' mapi* (Grinnell 1972:1:249; Hart 1981:13).

[medicinal] Tribes outside the Black Hills area are known to have used the inner bark in a tea used as an emetic (Vestal and Schultes 1939:41), but there are no reports of such use for tribes who lived in this region.

[art & manufacture] The Cheyennes made ceremonial bowls, as noted above, from its wood, the Hidatsas used it in their basketry (Nickel 1974:57), and the Lakotas used the wood in making pipe stems and the forked stems for bracing tipi poles (Standing Bear 1988: 98, 99).

[fuel] Larson and Johnson (1999: 480) mention that the wood of this tree produces long burning hot embers, making it attractive for culinary and ceremonial purposes. The Arikaras considered it a good source of fuel, although it was difficult to split (Nickel 1974:57). It was the favorite firewood of the Cheyennes (Hart 1981:13). The Lakotas used dried box elder wood for the fire at a young woman's puberty ceremony (Walker 1980:244), the Kiowas fueled their altar fires with it at Native American Church ceremonies (Vestal and Schultes, 1939: 40), and the Cheyennes relied on it when making spiritual fires for medicines, lighting tobacco pipes, and the Sun Dance (Hart 1981:13, 1992: 5).

[symbolic & ceremonial] Several tribes employed the bark to make charcoal for ceremonial painting and tattooing (Gilmore 1919:101). The Cheyennes carved their ceremonial root digger for the Sundance from this wood (Grinnell 1972:2:60), and they used the knots of the wood to shape bowls in which medicines were mixed ceremonially and special feast foods were served (Grinnell 1972:1:171; Hart 1981:13). The Lakotas carved their grass dance whistles from box elder wood (Densmore 1918:471), and they also made wooden plates out of this wood for use in the *Pte san lowampi* (Fletcher 1883c: 266). This tree is frequently mentioned in the oral traditions of the Arikaras (Gilmore 1987:119-125).

Anacardiaceae
The Cashew Family

Two shrubs in the cashew family, skunkbush and smooth sumac, were widely used by the tribal nations of the Plains for multiple medicinal and ceremonial purposes, and they were also favored for food and medicinal uses by European Americans who settled in the region (Kindscher 1987:190-94, 1992:182-88). Both shrubs range widely in the environs of the Black Hills (Johnson and Larson 1999:238,240). Notwithstanding its poisonous toxins, another member of the cashew family, poison ivy, has reported uses.

Rhus aromatica
[skunkbush]

Skunkbush, a.k.a. squawberry or stinking hazel, is widespread throughout the northern and central Plains (Kindscher 1987:191-92).

Names:

Cheyenne (Grinnell 1972: 2:180; Hart 1981:14)
ho a to' o nuts [smoke issues]
alternate: *ho?atoono?estse*

Comanche (Carlson and Jones 1939:524)
datsipv [no translation given]

Kiowa (Vestal and Schultes 1939:39)
dtie-ai-pa-yee-'go [bitter red berry]
alternate: *t'a'npe-a'* [no translation provided]

Lakota (Buechel 1970:126; Rogers 1980:32)
canun'kcemna [wood smells of feces]

Plains Apache (Jordan 1965:48)
cede.kose. [bitterseed]

Habitat: In the Black Hills, skunkbush is located from the low elevation grasslands to the mid elevation limestone meadows where it appears in open locations or at the base of ponderosa pines, including at Wind Cave National Park (Larson and Johnson 1999: 482; Pisarowicz 2001j:1).

Uses: Skunkbush was used for a wide variety of different purposes by the tribal nations who lived and traveled within range of the Black Hills.

[food] The fruit was eaten fresh and cooked, or dried for later use by the Kiowas and Plains Apaches (Vestal and Schultes 1939: 39; Jordan 1965:48). In fact, the Kiowas considered skunkbush fruit to be one of their ancient foods (Vestal and Schultes 1939:40, 72). The Plains Apaches used the berries in their green stage for a sauce, and in their orange stage, the Utes mixed them with grass seeds to make a food called "tattie." (Albers and Lowry 1995:56). Other tribal nations from the Black Hills region do not appear to have consumed skunkbush berries as a regular part of their diet, but they were probably taken opportunistically.

[medicinal] Many tribes, however, relied on skunkbush for medicinal preparations. The Cheyennes boiled the leaves in decoctions to treat edema and headcolds; they chewed the fruits to treat toothaches and to protect the hands from being scalded in hot water (Hart 1981: 14, 40). The Comanche also used the plant to treat colds (Carlson and Jones 1939:524, 534), while the Kiowas relied on it to doctor influenza and stomach ailments (Vestal and Schultes 1939:40).

[veterinary] The Cheyennes treated their racehorses with a remedy made from skunkbush to prevent them from getting tired and also to promote urination (Hart 1981:14).

[art & manufacture] Skunkbush also had a variety of manufacturing uses: the stems and shoots for basketry, the roots for a yel-low dye, the wood for making bows, and the leaves for tanning processes (Vestal and Schultes 1939:40; Nickerson 1966:48; Kindscher 1987:192). The Lakotas used skunkbush berries for making red dyes (Lyford 1940: 42).

[symbolic & ceremonial] The Lakotas added the leaves to their tobacco mixtures (Buechel 1970:126; Lewis, T. 1990:47), and the Cheyennes, Kiowas, and Plains Apaches did so as well (Vestal and Schultes 1939:40; Jordan 1965:128; Grinnell 1972:2:180; Hart 1981:14). The *Ta'aipeko*, one of the Kiowas' six ceremonial societies, is reputedly named after the berry of this plant (Vestal and Schultes 1939:40).

Rhus glabra
[smooth sumac]

Also called lemonade sumac, since its berries are often used to make a cooling beverage, this plant is widely found in the northern and central Plains (Kindscher 1987: 190-194, 1992:182-188).

Names:

Cheyenne (Grinnell 1972:2:180; Hart 1981:14)
no'anio ni mai'kimins [mixing ingredients]
alternate: *no?aneone-make-menotse* [mixing red berries]

Comanche (Carlson and Jones 1939:524)
dimeyov [no translation given]

Kiowa (Vestal and Schultes 1939:39)
maw-kho-la [tobacco mixture]

Lakota (Buechel 1970:127; Rogers 1980:33)
canzi [yellow wood]

Plains Apache (Jordan 1965:128)
ikasci.de [mix with something]

Ponca (Gilmore 1919:47)
mi bdi hi [no translation provided]

Habitat: This shrub is commonly located in upland prairies, thickets, and pastures or bordering fences, roads, and woodlands at

low to mid elevations in the Black Hills (Larson and Johnson 1999:482). It grows at Wind Cave National Park.

Uses: Smooth sumac played important medicinal and ceremonial roles in the cultures of the tribal nations who lived around the Black Hills.

[food] Tribal nations outside the Black Hills region are reported to have made a tea from the fruit and flowers (Kindscher 1987:92), but this has not been documented for local tribes. Comanche children ate the fruits, however (Carlson and Jones 1939: 524).

[medicinal] The Poncas boiled the fruits to stop postpartum hemorrhaging in women, they used the root in a diuretic decoction, and they crushed the leaves to make a poultice to treat wounds and skin irritations (Gilmore, 1919:48). They also combined the fruits and root in a remedy for skin sores (Kindscher 1992:184). The plant is also reported to be a herbal remedy in European American folk medicine (Kindscher 1992: 186; Hart 1992: 55).

[art & manufacture] The manufacturing uses of this plant were similar to skunkbush (Kindscher 1987:192). The Kiowas, for one, used roots dug during the spring to make a yellow-orange dye (Vestal and Schultes 1939:39).

[symbolic & ceremonial] When the leaves turn red, the Lakotas, Cheyennes, Comanches, Plains Apaches, Kiowas, and Poncas were all reported to pick and dry them for their tobacco mixtures (Gilmore 1913b:367, 919:47; Carlson and Jones 1939: 524; Vestal and Schultes 1939:39; Jordan 1965:128; Buechel 1970:127; Hart 1981: 14). The Kiowas also smoked the leaves for their purifying effects, which were believed to be effective in the treatment of tuberculosis (Vestal and Stanley 1939: 38).

Taxicodendron rybergii
[poison ivy]

This well-known and toxic shrub is widely distributed throughout the northern and central Plains (Johnson and Larson 1999: 240).

Names:

Lakota (Buechel 1970:586; Rogers 1980:33)
wikoskat tape'juta [medicine for women's disease]

Ponca (Gilmore 1913b:335)
hthi wathe [to make sore]

Habitat: It ranges from low to mid elevations in the Black Hills, where it is frequently sighted in rock outcrops, woodland margins, deciduous drainages, and ponderosa pine forests (Larson and Johnson 1999:484). It is identified with a variety of habitats at Wind Cave National Park (Pisarowicz 2001h:1, 2001i:1, 2001j:1).

Uses: Since its resin is highly irritating to human skin, the plant is generally avoided.

[medicinal] Even though Reverend Eugene Buechel (1970:586) wrote that the plant has no medicinal value, its name does suggest that the root may have been used by the Lakotas to treat venereal disease in women. That this may have been the case is suggested by the Kiowas' use of the plant; they rubbed it over the surface of boils, skin eruptions, and other types of running or non-healing sores. Dermatitis followed the application, but when it disappeared, the sores were healed (Vestal and Schultes 1939:39).

Asteraceae
Aster Family

Several species from this family, including various sagebrushes, rabbit brush, and broom snakeweed, were important to the tribal nations of the region.

Artemisia spp. [sagebrush]

As noted in regards to the non-woody varieties of *artemisia*, it is not always clear how to gloss species in this genre with the varieties of names typically associated with them in American Indian botanical nomenclatures. *A. tridentatata* [silver sage] for example, is often reported in the same ceremonial contexts as the non-woody variety, *A. ludoviciana*, while *A. filifolia* is often used interchangeably with the non-woody variety, *A. frigida.* The two woody varieties in the Black Hills, *A. cana* [silver sage] and *A. tridentatata*, are found predominately in the drier western and southwestern areas of the Hills. Neither of these varieties is found at Wind Cave National Park. However, *A. filifolia* or sand sagebrush, not reported for the Black Hills, is found in rangelands in the southwestern parts of South Dakota often in great abundance locally (Johnson and Larson 1999:242), and it is present at Wind Cave National Park (Pisarowicz 2001i:3).

Names:

Kiowa (Vestal and Schultes 1939:55)
h-taig-h-gai [no translation]
A. filifolia

Lakota (Buechel 1970: 439, 587; Rogers 1980: 35-36)
peji hota tanka [big grey leaf]
A. tridentatata
peji hota toto [grey blue leaf]
A. cana
peji hota swula [small grey herb]
A. filifolia and *A. frigida*
alternate: *winyan tapeji' hota* [woman's grey leaf]

Plains Apache (Jordan 1965:140)
^ *eldisgo.dedica.hi* [big sage]

Habitat: *A. cana* is found in the foothills and valleys of the Black Hills, primarily in the southwestern portions of the region (Larson and Johnson 1999: 484). *A. tridentatata* is the much more common and widely distributed species of sagebrush, and while it is frequent on the western slopes of the Hills, it is uncommon in the east (Larson and Johnson 1999:486).

Uses: Clearly, these varieties of sage were much more important to tribes who lived on the western side of the Black Hills, with much less information on their uses by tribes who lived and traveled in the east.

[food] The Lakotas ate *A. tridentatata* seeds raw or dried and pounded them into a meal (Rogers 1980:49).

[medicinal] *A. tridentata* was also used as a medicine among the Lakotas. Although Rev. Eugene Buechel (1970:439) did not report its specific applications, modern Lakota medicine men told Thomas Lewis (1990:135) that it was brewed in teas for earaches, respiratory complaints, diarrhea, and stomachaches.

A. filifolia is reported to be the sage the Lakotas identified as "women's medicine," which was used to treat irregular menstruation. This sage and *A. cana* were used to cleanse women after their period (Gilmore 1913b:369-370; Buechel 1970:587). The Kiowas made a decoction of *A. filifolia* to treat indigestion, flatulence, biliousness, and intestinal worms, and they also treated scalp diseases with it (Vestal and Schultes 1939: 55).

[cosmetic & hygienic] The Kiowas employed *A. filifolia* to dry their hands and as a "toilet paper," and the Plains Apaches did the same (Vestal and Schultes 1939:55; Jordan 1965:140). The Lakotas use *A. cana* and *A. tridentata* to freshen the air in their homes (Kemnitzer 1970: 64).

[art & manufacture] Modern Lakota hunters rub silver sage on traps, guns, and themselves to disguise their own scent (Kemnitzer 1970: 64).

[fuel] Woody varieties of sage were probably an important source of fuel for many of the tribal nations who lived in the high altitude deserts and steppes west of the Black Hills (Larson and Johnson 1999: 486).

[symbolic & ceremonial] *A. tridentata* is considered a potent purifier for many ceremonial activities among the Lakotas. Like cedar, sage does not die off in the winter, a fact noted in some discussions of the ceremonial roles it plays among the Lakotas (Kemnitzer 1970:65). It is very important in *Yuwipi* ceremonies, where, among its many different roles, it covers the floor in the sacred spot the ceremony is performed, it functions as a plug for the pipe, it is attached to the knots of thongs that tie up the medicine man, and it is placed on the water dish and on the kettle of dog soup (Kemnitzer 1970:64). This variety of sage is also spread on the floor of a sweat lodge, and it is used in the Sun Dance to fill the orifices of the buffalo skull, to plug the pipes of dancers, and as a medicine to heal the wounds of those who make sacrifices (Kemnitzer 1970:65).

Ericameria/Chrysothamnus nauseosus **[rubber rabbitbrush]**

Rabbitbrush is a common plant in areas west of the Missouri River where it typically grows in dry rangelands (Kindscher 1992: 233-233; Johnson and Larson 1999:242).

Names:

Cheyenne (Grinnell 1972:2:187; Hart 1981:20)
o'iv is se' e yo [scabby medicine]
alternate: *me?eshkaatseh?estse* [hairy plant]

Lakota (Buechel 1970:439; Rogers 1980:36)
peji hota sicamana [bad smelling grey grass]

Habitat: Rabbitbrush is also more abundant on the western side of Hills where it is frequent in dry grassland and foothill locations (Larson and Johnson 1999:486).

Uses: Many of the uses associated with rabbitbrush are reported for tribal nations whose historic territorial ranges extended into areas west of the Black Hills

[food] The Lakotas pounded the roots to extract a black colored juice that was used as a chewing gum (Standing Bear 1988:101).

[medicinal] The Cheyennes prepared the leaves and stems in a decoction to treat skin sores, including those associated with smallpox, and they also burnt the leaves and branches on box elder wood to treat nightmares (Grinnell 1972:2:187; Hart 1981: 20).

Gutierrezia sarothrae **[broom snakeweed]**

In South Dakota, this plant typically grows in the western part of the state where it is found in habitats associated with western wheatgrass, big sagebrush, and short grasses (Johnson and Larson 1999:246). It grows at Wind Cave National Park (Pisarowicz 2001h:3).

Names:

Comanche (Carlson and Jones 1939:522)
sanaweha [no translation given]

Lakota (Buechel 1970:440; Rogers 1980:37)
peji zizi [yellow grass]

Plains Apache (Jordan 1965:65)
bekozo.se [broom]
alternate: *^o'xehaci'a'* [grass burns quickly]

Habitat: Mostly found at lower elevations in sagebrush-grassland, mahogany shrubland, open pine woodland, and open grassland, It is widespread in the Black Hills (Larson and Johnson 1999:488).

Uses: Apart from its use in making brooms, broom snakeweed was used as a medicine for treating ailments in humans and animals (Kindscher 1992: 251-252).

[medicinal] The Lakotas boiled the entire plant in a tea used for coughing and colds, and they also applied it as a remedy for dizziness (Buechel 1970: 440). Plains Apaches boiled the tops of mature plants in a tea to treat colds and respiratory conditions, and also as an external remedy for skin rashes and fungus (Jordan 1965:65-66). Colds were treated with this plant as well by the Comanches (Carlson and Jones 1939: 522). The Crows treated kidney problems with a tea made from the flowers, they produced a steam infusion to doctor sinus inflections, and they applied a liquid solution to swellings (Kindscher 1992:251).

[veterinary] Lakotas used the plant in a remedy to treat diarrhea in horses (Gilmore 1913b:368; 1919:133).

[art & manufacture] Its English name is derived from the popular use of its stems for making brooms (Kindscher 1992:251). Two tribes who once lived in the Black Hills area, the Comanches (Carlson and Jones 1939:522) and Plains Apaches (Jordan 1965 1965:65), are reported to have done so too.

[symbolic & ceremonial] The Plains Apaches occasionally used this plant to sprinkle water on the fire in a sweat lodge (Jordan 1965: 66), and the Lakotas included it in one of the "war medicines" they rubbed on their body before battle (Densmore 1918: 350).

Berberidaceae
The Barberry Family

Only one species from this family is reported in the Black Hills, and its names and uses have been documented for only a few of the tribes in the general area.

Mahonia/Berberis repens
[Oregon grape or creeping barberry]

This is a plant that reaches its easternmost extension in the forested and high elevation landscapes of the Black Hills.

Names:

Cheyenne (Hart 1981:15)
mehme-menotse [spicy berries]

Kiowa (Vestal and Schultes 1939:28)
'kawadl-shap-pa-a [no translation given]

Habitat: The Oregon grape is most commonly located along forested Hillsides and canyons over the entire range of the Black Hills from the foothills to the high limestone plateau (Larson and Johnson 1999:488).

Uses: Uses for Oregon grape are much more common for tribal nations who lived and traveled in regions to the south and west of the Black Hills.

[medicinal] The Kiowas knew the plant but made no use of it (Vestal and Schultes 1939:28). The Cheyennes, on the other hand, used its roots as a medicine for unspecified purposes (Hart 1981:15). In fact, Larson and Johnson (1999: 488) report that the root contains an antimicrobial, which is effective in treating infections, liver disorders, and digestive ailments.

Betulaceae
The Birch Family

Several species in this family are named in native nomenclatures, but only two are reported to have any uses.

***Betula* spp.**
[birch]

Three varieties of birch are located in the Black Hills, *B. occidentalis* [water birch], *B. minor/papyrifera* [dwarf water or paper birch], and *B. pumila* [bog birch]. The one

tribal name found in the literature is generic to the family and does not distinguish between species. Most of the uses connected with it come from tribal nations outside the region.

Names:

Lakota (Buechel 1970:116)
canha'san [whitish bark tree]
B. occidentalis also applies to maple.

Habitat: The most common species in the Black Hills is *B. occidentalis*, which is found at mid elevations in moist locations along streams, hillsides, and boggy sites. *B. papyrifera* is also common in the area, and it can be found at lower elevations in canyons, cool drainages, and in the transitions between forest and meadow (Larson and Johnson 1999: 490-491). This is the only one noted for Wind Cave National Park (Pisarowicz 2001f:1). The least common, *B. pumila*, is restricted to higher elevation boggy sites in the central and northern Hills (Larson and Johnson 1999: 490-492).

Uses: The tribes in the Black Hills region appear to have had little use for birch trees, since there is not much information in ethnobotanical sources. Although tribes, such as the Cheyennes, recognized them (Grinnell 1972:2:212, 245) and probably had important uses for them in their former Great Lakes homelands, many of their functions were now performed with hide.

[food] The Lakotas used the same name for the sugar maple tree, and this suggests that they may have tapped birch trees for their sap. This was a common practice among Numic speaking peoples in the Intermountain West (Albers and Lowry 1995:34).

[art & manufacture] The Arapahos used the bark to make an orange dye (Nickerson 1966:47).

Corylus cornuta **[beaked hazelnut]**

The better-known *C. Americana* is reported in the Black Hills, but it is rare (Larson and Johnson 1999:492). The nuts of the hazel species are hard to collect in the plains region, not only because they bear less fruit, but also because they are a favorite source of food for birds and other small animals (Kindscher 1992:99).

Names:

Lakota (Buechel 1970:508)
u'ta [hazelnut, acorn]

Ponca (Gilmore 1919:74)
zhinga-hi [hazel bush]

Habitat: This tree is located outside the environs of Wind Cave National Park from low to high elevations in the northern and central portions of the Hills at the edge of meadows and moist woodlands (Larson and Johnson 1999:492). In 1875, however, Walter Jenney (in Newton and Jenny 1880: 316) reported that they grew in extensive patches in the southeastern Hills.

Uses: Other than the opportunistic collection of the tree's nuts, there are no other reported uses for this tree among the tribal nations who lived in the vicinity of the Black Hills.

[food] Notwithstanding the difficulties in collecting them, Lakotas and Poncas ate hazel nuts raw or pounded them into a meal for thickening soups (Gilmore 1919:74). In times of food scarcity, they became an important emergency food especially during the winter months (Hassrick 1964:156, 180).

Ostrya virginiana **[ironwood]**

Also known as hop hornbeam, this member of the birch family is located mainly in the northern and eastern sections of the Black

Hills (Larson and Johnson 1999:494). The Lakotas called ironwood *ispan'spanheca* [to make something soft by using for pounding], or, alternatively, *can maza* [ironwood]. They are the only Native group with documented applications for this plant. The blossoms were applied in face paint, and the wood went into the construction of bows (Buechel 1970: 233). The Poncas and Omahas called it *he'tazhonta* (Fletcher and La Flesche 1972:106).

Caprifoliaceae
The Honeysuckle Family

Five species from this family have been identified with names and uses in ethnobotanical sources, with coralberries and snowberries being the most important to local tribes.

Lonicera spp.
[honeysuckle]

Two species of honeysuckle are reported in the Black Hills, *L. dioica* [limber honeysuckle] and *L. tartarica* [Tartarian honeysuckle] (Larson and Johnson 1999:494-96). Neither of these varieties is very common in the Black Hills. *L. dioica* is found in moist locations in the northern and central Hills at low to mid elevations, while *L. tartarica*, which was introduced to the area from Eurasia, is typically found near towns at low elevations. Its Lakota name is *cani'skuye* [sweetened wood], which refers to *L. dioica* (Buechel 1970:118). No uses have been reported for either variety among the tribal nations who lived and traveled in the region of the Black Hills, despite the Lakota's suggestive name for the plant.

Sambuicus racemosa
[stinking elderberry]

This particular species of elderberry is commonly associated with the eastern woodlands. Other species, however, are widely found in the moist, mountainous locations of the greater Northwest where they were an important food for Native populations (Kindscher 1987: 249-250).

Names:

Dakota (Gilmore 1919:115)
canputa'hu [upper lip skin tree]
S. Canadensis but may include this variety too.
*Note: There is no reference to elderberry in Buechel's dictionary (1970), which suggests that this berry may have been consumed primarily by Dakotas east of the Missouri River.

Poncas (Gilmore 1919:115)
Wagathahashka [elder bush]

Habitat: This plant frequently appears in the central and northern Black Hills at mid to high elevations in moist locations (Larson and Johnson 1999:496). It is found in ravine environments at Wind Cave National Park (Pisarowicz 2001j: 1).

Uses: Elderberries were used mostly as a food by native peoples in the Plains region.

[**food]** Larson and Johnson (1999: 496) note that this particular elderberry is poisonous if eaten in large quantities. Melvin Gilmore (1919: 115) reports that the Dakotas and the Poncas ate elderberries fresh; these two tribes also soaked their blossoms in hot water to make a pleasant tasting beverage. The Kiowas are also reported to have been fond of elderberries (Vestal and Schultes 1939:52).

Symphoricarpos spp.
[snowberry]

Two *Symphoricarpos* species are located in the Black Hills, white snowberry, *S. albus*, and western snowberry, *S.occidentalis*. Both are also widely distributed in areas adjacent to the Hills (Johnson and Larson 1999:246).

Names:

Cheyenne (Hart 1981:17)
mehme-menotse [spicy berries]
probably refers to *S. occidentalis*

Kiowa (Vestal and Schultes 1939:52)
gu-la-ko-'kee-a [no translation given]
S. occidentalis

Lakota (Buechel 1970:399,575,659; Rogers 1980:43)
on'sunk'nasapi [stem to hunt dogs with]
S. occientalis
Alternate: *zuzeca tawote* [snake food]

Ponca (Gilmore 1919:116)
Inshtogahte-hi [eye lotion plant]
S. occidentalis

Habitat: *S. albus* is a very common understory in the forests of the central and northern Black Hills from low to high elevations, while *S. occidentalis* is more widely distributed in the Hills at low to mid elevations in meadows and foothill grasslands (Larson and Johnson 1999: 498). Both species grow at Wind Cave National Park (Pisarowicz 2001h:2, 2001j: 1).

Uses: Larson and Johnson (1999:498) report that the two species had similar uses for native populations in the area, and some of these correspond with those documented for tribes in regions further west (Kindscher 1992:283-284).

[food] The Hidatsas ate snowberries fresh and collected them during the late winter and early spring from the last season's growth (Nickel 1974:74).

[medicinal] The Lakotas and Poncas steeped snowberry leaves to make a remedy for weak or inflamed eyes (Gilmore 1913b: 367; 1919:116). According to William Schweigman (in Lewis, T. 1990: 137), a Lakota healer, the plant was also relied on to treat sexual disorders in women. The Hidatsas used the bark in a decoction to treat snow blindness (Nickel 1974:74). Larson and Johnson (1999: 498) suggest that all parts of plant were employed in dressing wounds, but they do not give the tribal attributions for this.

[art & manufacture] When playing, Lakota boys are said to have made arrows from the stems of *S. occidentalis* to shoot at dogs (Buechel 1970:399). Hidatsa women made brooms, mattresses, and snares for prairie chickens from the stems of this plant (Nickel 1974:74), and the Lakotas made a red dye from its berries (Hassrick 1964:191).

[symbolic & ceremonial] The Cheyennes placed branches of *S. occidentalis* at the four directions of their Sun Dance altar (Grinnell 1972:2:259; Hart 1981:17).

Viburum lentago **[nannyberry]**

This tree is frequently found in moist habitats at low to mid elevations in the central and northern Black Hills (Larson and Johnson 1999: 500). It also grows at Wind Cave National Park (Pisarowicz 2002c:1). The Lakota name for it is *mna-hu* [our translation: swollen stem] (Gilmore 1919: 115) and in Ponca (Gilmore 1919:115) *nan-shaman* [no translation given]. The Hidatsas are known to have gathered large quantities of the fruits in season (Nickel 1974:75), but, according to Melvin Gilmore (1919:115), other tribes took them opportunistically.

Virbunum opulus **[highbush cranberry]**

Restricted to wet habitats in the northern Black Hills, the berries are gathered by European Americans for flavoring jelly. European Americans also processed the bark for a medicinal tea to diminish cramps, and the flowers were mixed in a decoction for the treatment of skin conditions (Larson and Johnson 1999:500). No names have been found for this plant in native languages, nor have any uses been reported for it among the tribal nations who used the Hills in historic times.

Celastraceae
The Staff Tree Family

Only one species in this family, *Celastrus scandens* [American Bittersweet], is located in the Black Hills. It is a very common plant of the eastern deciduous forests, which extend into the prairie states through wooded river and stream valleys. It is frequent in the low elevation canyons on the northern, eastern, and southern sides of the Black Hills (Larson and Johnson 1999: 502). The Lakotas knew it as *wohlokapi sni pejuta* [medicine to ward off wounds/our translation]. They believed that when the red roots are chewed and smeared on the body, a person would be protected from being wounded (Buechel 1970:599).

Chenopodiaceae
The Goosefoot Family

The only species from this family listed for the Black Hills, greasewood, is rare in its occurance. It has important uses among the Cheyennes. Two species, not reported for the Hills but common in the general region, were also named and/or used by local tribal nations.

Atriplex canescens
[fourwing saltbrush]

Although not reported specifically for the Black Hills, saltbrush is very common in the regions surrounding the Hills (Johnson and Larson 1999: 248). The Lakotas called it *pangi sasa* [red tuber] or alternatively, *tinpsinla sasa* [red turnip], but there are no references on how it might have been used if at all (Buechel 1970:430,489). The Arapahos and Shoshones applied all parts of the plant in the manufacture of a yellow dye (Nickerson 1966:47).

Krascheninnikovia lanata
[winterfat]

Winterfat appears occasionally in the mixed grass prairies of the Black Hills' southern and western foothills (Larson and Johnson 1999: 502). In Cheyenne, winterfat is called *hetanevanósz*, and it is the man sage used in the Sun Dance and other sacred ceremonies (Whiteman in Schwartz 1988:52).

Sarcobatus vermiculatus
[greasewood]

This is another plant that grows occasionally in western South Dakota but is rare in the Black Hills (Johnson and Larson 1999:250). The Cheyennes are the only group reported to have named and used it. They knew it as *ve?ohke-vano?e* [bitter sage], and they applied it for variety of different purposes (Hart 1981:17). In one medicinal application, the Cheyennes sharpened the ends of greasewood sticks for puncturing instruments to draw blood, and they also fashioned the sticks into tools to deliver acupuncture-like piercings. They also treated horse sprains and bruises with this wood (Hart 1981:17). Sticks of greasewood are used for making the man design upon which Sun Dancers dance and for hanging Sun Dance whistles. In addition, they serve as tampers for tobacco pipes and as the upright twirling sticks for making fires. Finally, the Cheyennes made arrow-shafts from greasewood (Hart 1981:17).

Cornaceae
The Dogwood Family

The only woody species from this family located in the Black Hills, Redosier dogwood, remains very important to tribal nations in the region.

Cornus sericea (C. Stolonifera) **[redosier dogwood]**

Different varieties of dogwood were widely used by the tribal nations of the Plains as an ingredient in tobacco mixtures smoked on ceremonial occasions (Kindscher 1987:193). This includes the variety reported for the Black Hills.

Names:

Cheyenne (Grinnell 1972:2:183; Hart 1981:23; Whiteman in Schwartz 1988: 53)
mah' kom e his [red bark]
C. sericea
alternates: *a?oome-hesono*
ma?koome-hesono
hoatonoaneonoz

Comanche (Carlson and Jones 1939:521)
pariobi [no translation given]

Kiowa [Vestal and Schultes 1939:46]
zaikh-'kon-a [arrow wood]
alternates: *gwai-gee-ap-aip* [no translation given]
sek'an' kan [no translation provided]

Lakota (Buechel 1970: 123; Rogers 1980: 44)
cansa'sa [red wood]
but probably referred originally to *C. anomum*
cansa'sa hcaka [real or original wood]
C. sericea (considered the best for smoking)

Plains Apache (Jordan 1965: 63)
kahkas [arrow branch]
C. dromondii

Ponca (Gilmore 1919:108)
ninigahi [to mix for the pipe]
C. anomum
ninighai hte [the real or original]
C. sericea

Habitat: Commonly found over the entire Black Hills, dogwood favors moist locations along stream banks, lake shores, and springs (Larson and Johnson 1999: 504). It also appears at Wind Cave National Park (Pisarowicz 2002c:1).

Uses: Tribes throughout the area employed the stems and bark of this plant.

[food] The Hidatsas are the only tribal nation in the region of the Black Hills that are reported to have eaten the berries of this shrub on a regular basis (Nickel 1974:61).

[medicinal] The Cheyennes mix the berries of this plant with chokecherries and bearberry to make a medicine called *sepo* that is used to treat a variety of aliments (Whiteman in Schwartz 1988: 53).

[art & manufacture] The Cheyennes wove the root stems in baskets, which they used for playing a popular seed game (Grinnell 1972:1:246), and the Crows em-ployed it in making drumsticks, tipi stakes, tipi pins, and forks for sweatlodge racks (Hart 1992: 20). The Plains Apaches relied on dogwood for manufacturing their arrow shafts, and they also used it to make backrests and drumsticks (Jordan 1965:63-64). The Kiowas, Cheyennes, and Comanches also manufactured their arrowshafts out of dogwood (Carlson and Jones 1939: 521; Vestal and Schultes 1939:46; Hart 1981:23).

[symbolic & ceremonial] The inner bark of dogwood is removed from the outer bark as shavings and placed in tobacco mixtures used in pipe-smoking on diplomatic and ceremonial occasions among the Cheyennes, Lakotas, Arikaras, and Poncas (Gilmore 1919:108, 1987:106; Grinnell 1972:2:183; Buechel 1970:123; Hart 1981: 23, 1992:20; Lewis, T. 1990:46). The Lakotas use it in their tobacco mixtures when fasting and seeking a vision (Walker 1980: 85,132), in the consecration of their pipes (Walker 1980:87), and in the *Hunka* ceremony (Walker 1980:209). Today, a special ceremony held by Lakotas in the area of the Buffalo Gap and the Race Track at the time of the vernal equinox involves the procural of this tobacco and kinnikinick (Albers and Kittleson 2002). The Lakotas believe that dogwood for smoking must be collected before the arrival of the thunders in the early spring and after the first frost in the fall (Goodman 1992:7). The Cheyennes use dogwood sticks to make the rainbow in their Sun Dance altar because it symbolizes the

moisture needed to bring life to a dry land (Hart 1981:23-24).

Cupressaceae
The Cypress Family

Three species in this family are reported in the Black Hills, and all of them are associated with medicinal uses in European American and American Indian cultures.

Juniperus communis
[common juniper]

This is a common understory plant in pine and spruce forests throughout the Black Hills (Larson and Johnson 1999:504), and it is present at higher elevations in Wind Cave National Park (Pisarowicz 2001i:1). The Cheyennes named it *heshkove-shestoto?e* [thorny], and they called *J. sibirica,* another low growing species, *wi' iv tsis' to to* [ravine coniferous tree] (Grinnell 1972:2: 169; Hart 1981:4). European Americans often grind the berries of the common juniper to flavor meat (Larson and Johnson 1999). The common juniper is a popular folk remedy among European Americans for menstrual ailments, or to expel afterbirth, to treat ulcers, and to cure diarrhea (Kindscher 1992:133-34). Similar uses have also been reported for the Utes and other tribal nations west of the Black Hills (Albers and Lowry 1995: 44). The Cheyennes made a tea from *J. sibirica* to treat coughs and sore throat (Grinnell 1972:2:169-70), but nothing is reported for *J. communis.*

Juniperus horizontalis
[creeping juniper]

This species of juniper is occasionally found in the lower elevation hillsides and open woods of the northern Black Hills (Larson and Johnson 1999: 506). The Cheyennes knew it as *evoneesheenose-shestoto?e* [no translation given], and they treated coughs and tickling sensations in the throat with a medicine tea brewed from its boughs (Hart 1981: 4). The Hidatsas are the only other tribal nation for whom there is a report of a medicinal use of this juniper species (Nickel 1974:67).

Juniperus scopulorum
[Rocky Mountain juniper]

This and the related red cedar, *J. virginiana,* are considered sacred to tribes throughout the northern Plains. In the southeastern parts of the Black Hills, the two varieties of cedar hybridize (Larson and Johnson 1999: 506).

Names:

Cheyenne (Grinnell 1972:2:170; Hart 1981: 4)
wi' iv tsis' to to' [a tall tree]
J. scopulorum
alternate: *ve?eve-shestoto?e*

Comanche [Carlson and Jones 1939:522)
ekawai: pv [no translation]

Kiowa [Vestal and Schultes 1939: 13]
'ko-kee-ad-la; ahi'n [peculiar]
J. virginiana

Lakota (Buechel 1970: 192; Rogers 1980: 25)
hante (cedar)
J. scopulorum
hantesa (red cedar)
J. virginiana

Plains Apache [Jordan 1965:113)
gôad; dilkale. [odor spilling out]
J. virginiana

Ponca (Gilmore 1919:63)
maazi [red cedar]
J. virginiana

Habitat: The Rocky Mountain juniper is found over the entire Black Hills, mostly at lower elevations in transitional zones between ponderosa pine and prairie or sagebrush steppe. Red cedar is confined to the southeastern regions of the Hills (Larson and Johnson 1999). Only the Rocky Mountain juniper is reported at Wind Cave National Park (Pisarowicz 2001f: 1).

Uses: The tribal nations of the northern Plains and neighboring regions had myriad

uses for cedar, considering it especially beneficial for ceremonial purification and warding off evil influences. Indeed, Louis Kemnitzer (1970:66) notes that the Lakotas trade their own local cedar for varieties procured by tribal nations living in other parts of the United States and Canada, and they compare differences in their odorous qualities.

[food] The Utes, Comanches, and other Numic speaking tribes of the Intermountain West ate the berries of this tree (Carlson and Jones 1939:522; Albers and Lowry 1995: 65). The Lakotas did so as well but only on an occasional basis.

[medicinal] The Dakotas and the Lakotas made a tea from the leaves and berries that was administered for coughs, fevers, chest congestion, and pneumonia (Gilmore 1919: 63; Kemnitzer 1970:66; Standing Bear 1988:96, 102), and the Arikaras, Cheyennes, Crows, Kiowas, and Utes did so too (Vestal and Schultes 1939:13; Grinnell 1971:2:170; Hart 1981:5; 1992:37; Albers and Lowry 1995:65). The Lakotas also burnt the twigs in a smoke treatment for colds (Gilmore 1919:63; Kemnitzer 1970:66), and they brewed the seeds in a tea for gastrointestinal disorders (Feraca 1998:78). According to John Moore (1974a:171), the Cheyennes used green cedar berries for diseases relating to the teeth and eyes and red cedar berries for blood-related illnesses. They made a vaporizer from the leaves for treating colds and fever (Hart 1981:5), and they burnt the twigs to treat hyperactivity (Grinnell 1972: 2:170; Hart 1981:5). In addition, the Cheyennes made a tea from cedar to quicken delivery in childbirth (Grinnell 1972:2: 170). The Crows steeped it in a tea for removing the afterbirth, to check diarrhea, and to stop nosebleeds (Hart 1992:36). The Kiowas chewed the berries as a treatment for canker sores (Vestal and Schultes 1939:13), and the Plains Apaches made a tea for treating hemorrhages and the after pains associated with childbirth (Jordan 1965:118). The Hidatsas employed it as well, but the specific medical applications remain unidentified (Nickel 1974: 66). Long associated with herbal traditions in Europe, it is not surprising that the cedar was widely used by early European American settlers in their folk remedies (Hart 1992:36; Tilford 1997:84).

[veterinary] The Lakotas brewed the berries and twigs in a tea to treat coughs in horses (Gilmore 1919:63).

[art & manufacture] The Lakotas made a fluid out of the powdered and boiled needles, which is supposed to eradicate potato bugs (Buechel 1970:192). The Cheyennes valued juniper wood for its durability and used it for making lance shafts and bows (Curtis 1907-30:6:156; Hart 1981:5). The Lakotas, Cheyennes, Kiowas and Plains Apaches made their love flutes from the heartwood of red cedar (Vestal and Schultes 1939:13; Jordan 1965:113; Hart 1981:5; Standing Bear 1988:97,173). The Kiowa and Plains Apaches also valued the durability of its wood for making lodgepoles (Vestal and Schultes 1939:13; Jordan 1965:113). European Americans used the tree for making fence posts, pencils, and chests (Larson and Johnson 1999:506). Its fragrant wood is still employed for these purposes and to protect woolens from moths.

[symbolic & ceremonial] Considered highly sacred, the twigs are burnt as a smudge for spiritual purification in many healing and religious ceremonies among all tribes in the northern Plains (Gilmore 1919:64; Carlson and Schultes 1939: 522; Vestal and Schultes 1939:13; Walker 1980:93; Hart 1992:36; Kindscher 1992:132). The Lakotas placed cedar boughs on tipi poles to ward off lightning (Gilmore 1919:64; Standing Bear 1988:96-97), and they made a *wazilya* [incense] out of cedar whenever they petitioned the thunders who favored the smell of this smoke (Walker 1980:77). The Cheyennes also burned cedar incense to ward off lightning and thunder (Hart 1981: 4). The Lakotas chewed a medicine made from the

boughs to put on scalp locks (Walker 1980:93), and the *Heyoka* burned cedar in their ceremonial encounters with the thunders (Walker 1980:155). Today, Lakotas use cedar in their *Yuwipi* ceremonies, in the meetings of the Native American Church, during Christian church services, and many keep it in their homes to attract luck and spiritual blessings (Kemnitzer 1970: 66-67). The Cheyennes also burned cedar to ward off lightning and thunder (Hart 1981:4), and they associated the tree's green berries with the green colored hailstones that fall during summer storms (Moore, J. 1974a:171). For the Arikaras, Gilmore (1987:180) lists cedar as one of three sacred trees whose chief purpose was to drive out evil influences. Cedar figures predominately in Arikara origin stories; it is the great protector and a ritual was held annually to show gratitude to the grandmother cedar. In this ritual, pasqueflowers and baby moccasins were hung on a cedar tree to insure health and long life (Gilmore 1987:186-87). This was another very important plant for the Plains Apaches, who burnt it as an incense and fumigant in most of their ceremonies; it was believed to ward off the negative influences of any spirit or ghost who might intend to bring harm to people (Jordan 1965:113-117).

Elaegnaceae
The Oleaster Family

Two members of this family are reported in the Black Hills. The Russian olive, *Elaeagnus angustifolia*, was introduced from Europe as a shade tree. It is now considered a troublesome predator in the riparian environments of the West. No names or uses for this tree have been reported in the ethnobotanical literature. The other member of the family, the buffaloberry (*Shepherdia*), however, is very important to the tribal nations of the region.

***Shepherdia* spp.**
[buffaloberry or rabbitberry]

Two buffaloberry a.k.a. rabbitberry species are located in the Black Hills, *S. argentea* (Silver) and *S. canandensis* (Russet or Canadian). Local tribes probably gathered both species, even though many reports refer to the Russet variety. Silver buffaloberry is found throughout the western portions of South Dakota and neighboring states (Johnson and Larson 1999:254).

Names:

Arapaho (Nickerson 1966:49)
auch-ha-haybena [no translation given]

Arikara (Gilmore 1987: 199)
natara-kapachis [no translation provided]

Cheyenne (Grinnell 1972:2:181; Hart 1981:25)
mat'si-ta-si'mins [red hearted]
alternate: *ma?ke-meniotse* [red berries]

Lakota (Buechel 1970:333-334; Rogers 1980: 44)
mastin'capute [rabbit lip tree]
S. argentea

Ponca (Gilmore 1919:106)
zhon-hoje-wazhide [no translation provided]

Habitat: Both species of buffaloberry are common in the area. Silver buffaloberry is found on banks above streams and dry drainages in the foothills and grasslands, including locations at Wind Cave National Park, while the Russet variety is located in moist forest or open habitats at mid elevations (Larson and Johnson 1999:508-510; Pisarowicz 2001j:2).

Uses: Buffaloberries are valued mainly as a source of food, although other uses have been reported for them.

[food] The Hidatsas prefer to eat buffaloberries fresh and pick them after the first freeze when they are particularly sweet (Nickels 1974:73). This is also true for the Dakotas (Albers 1966-1976). The Cheyennes, Arapahos, Lakotas, and Poncas consumed them fresh but dried most of them for

winter use (Bordeaux 1929:130; Hassrick 1964:178; Nickerson 1966:49; Buechel 1970:333-334; Nickels 1974:73; Grinnell 1972:2:181; Hart 1981:25; Gilmore 1987: 54). The Cheyennes and Mandans also made a pudding from them (Hart 1981:25). Today, they remain a favorite fruit among the Lakotas, who can and freeze them and prepare them in puddings for ceremonial occasions (Kemnitzer 1970:75; Nurge 1970: 67, 82; Standing Bear 1978:59). They are also a favorite berry for making jams among the Lakotas and Arapahos (Nickerson 1966:49; Nurge 1970:82). Early European American travelers in the region consumed large quantities of them and settlers garnished their meats with a sauce made from the berries and also made jellies from the fruit (Fall River County Historical Society 1976:119,243; Sundstrom, J. 1977: 227; Kindscher 1987:212; Larson and Johnson 1999:508).

[medicinal] The Cheyennes ground these berries into their medicinal mixtures (Hart 1981:25). Gregory Tilford (1997:21) reports that early European American settlers used buffaloberries in a tea to relieve constipation.

[art & manufacture] The Lakotas made a red dye from buffaloberries, and they used the thorns in making awls (Lyford 1940:38, 42).

[symbolic & ceremonial] Branches for the Cheyennes' Sun Dance altar were made from the young shoots of this plant (Hart 1981:25). Melvin Gilmore (1987:198-200) recorded a story of how a buffaloberry bush took pity on the Arikaras and showed them how to use its leaves. He also notes that this was one of the bushes where the Arikaras hung the bundles in which an infant's placenta was wrapped (Gilmore 1930:75).

Ericaceae
The Heath Family

All of the species from this family associated with the Black Hills have reported names and/or uses in the ethnographic and ethnobotanical literature on the region.

Arctostaphylos uva-ursi
[bearberry or manzita]

Also called "kinnikinick" or "larb," bearberry is not found in open grassland and prairie locations or in many of the river and stream valleys that the tribes of the region typically traveled and inhabited. Consequently, the Black Hills and other higher elevation, wooded locations would have been the only places where Lakotas, Cheyennes, and other tribal nations would have been able to secure this very important ceremonial plant.

Names:

Cheyenne (Grinnell 1972:2:183; Hart 1981:25)
no'an-i un ots [to mix]
alternates: *no?aneonotse* [mixture leaf]
ma?ke-menotse [red berry]

Lakota (Buechel 1970:520; Rogers 1980:44)
wahkpe canli [tobacco leaf]

Habitat: Bearberry is a common understory at all elevations in ponderosa pine forests that grow on granite and limestone soils (Larson and Johnson 1999:510), and it grows at Wind Cave National Park (Pisarowicz 2001i:2).

Uses: Local tribes value bearberry primarily for its medicinal and ceremonial applications.

[food] The berries were sometimes consumed as an emergency food since they remain on the bush throughout the winter months. Although tribal nations in western Montana used them as a condiment and

boiled them in broth, they do not appear to have had culinary uses for Native peoples who lived in the region of the Black Hills (Hart 1992:41).

[**medicinal]** The Cheyennes made a tea from the stems, leaves, and berries for the treatment of back pain; the tea was also applied as a compress with wetted leaves. The Cheyennes also used the plant as a smudge to treat people who were acting "crazy" (Grinnell 1972:2:183; Hart 1981: 25). The Lakotas put bearberry leaves in a pipe smoke treatment for wounds, and they included it in smudge treatments too (Walker 1980:93; Standing Bear 1988:103). Fools Crow (Mails 1991:165) ground the stems and roots of this plant to treat kidney ailments and back pain. The Crows pulverized the leaves and made a powder to treat canker sores of the mouth (Hart 1992: 41). European American herbalists rely on this plant in remedies for inflammations of the digestive and urinary tracks (Tilford 1997:86).

[symbolic & ceremonial] This is one of the most important plants added to Cheyenne tobacco mixtures (Hart 1992:40-41). Bearberry leaves were also the foundation of Lakota tobacco mixtures (Buechel 1970:520; Black Elk in DeMallie 1984:240, 334, 337, 339-340; Standing Bear 1988:103; Black Elk, W. and Lyon 1990:189; Lewis, T. 1990:46-47), and they filled the line drawn around the ceremonial altar at Lakota Sun Dances (Densmore 1918:122). The Arikaras combined their bearberry with red willow bark (Gilmore 1987:106), and the Cheyennes did so as well (Grinnell 1972:2: 183; Hart 1981: 25).

***Vaccinium* spp. [huckleberry and grouseberry]**

V. membranaceum [thinleaf or mountain huckleberry] and *V. Scoparium* [grouseberry or grouse whortleberry] are the two *Vaccinium* species found in the Black Hills. Both of these species typically occur at high elevations in the western United States, and consequently, they are more commonly used by tribal nations living in the Intermountain West than by those who occupied the central regions of the Plains.

Names:

Cheyenne (Grinnell 1972:2:183; Hart 1982:25)
mah' ki mins [small red berry]
V. Scoparium
alternate: *ma?ke-menotse* [red berry]

Lakota (Riggs 1968:125; Buechel 1970:168; Rogers 1980:44)
ha'za [huckleberry]
winohin taha'za [women's huckleberry]
wakanksin taha'za [blackbear's berry]
*The last two names are Dakota.

Habitat: Mountain huckleberry is not common in the Black Hills, and it is restricted to the northern mountain slopes above 5,000 feet in the Lead-Deadwood area Grouseberry is more widespread, but its also confined to the central and northern portions of the Black Hills where it is found in moist coniferous or mixed forest environments at low elevations (Larson and Johnson 1999: 512).

Uses: Of the tribal nations in the region, only the Cheyennes are reported to have used these berries for non-culinary purposes.

[food] Huckleberry is a very important fruit staple for tribes of the Rocky Mountains (Albers and Lowry 1995:34-35). While Plains tribes, including the Cheyennes and Lakotas, no doubt picked these berries opportunistically, they were not a major source of food. They are popular among European Americans who use them in jams, jellies, pies, syrups, and baked goods. Grouseberry is also edible, but its size is small and its yields are low (Larson and Johnson 1999: 512).

[medicinal] The Cheyennes gave children dried and pulverized grouseberries to increase their appetite, and the leaves and stems were mixed in water as a treatment for

nausea and loss of appetite (Grinnell 1972: 2:184). European American herbalists apply the leaves in decoctions to reduce blood sugar in diabetes (Tilford 1997:80).

[art & manufacture] The Lakotas made a yellow dye from the roots of the huckleberry (Hassrick 1964:191).

Fabaceae
The Legume Family

Two *Amorpha* species are located in the Black Hills, Leadplant and False indigo. Early explorers reported the leadplant, *A. canescens,* in great abundance amidst prairie grasses with good southern exposures. The bacterial nodules on its roots contribute to the cycling of nitrogen in native prairie ecosystems. After European American settlement, it was reduced by heavy grazing (Kindscher 1987:35-36). False Indigo, *A. fruitcosa,* which appears similar in many respects to the leadplant, is less common in the region

Names:

Comanche (Carlson and Jones 1939:521)
seha^abiv [no translation given]

Kiowa (Vestal and Schultes 1939: 31)
khawdl-pa [no translation provided]
A. fruitcosa

Lakota (Buechel 1970: 658; Rogers 1980:45)
zintkala tacan [bird's perch]
A. canescens and *A. fruitcosa*

Ponca (Gilmore 1919:93)
te-huntonhi [buffalo bellow plant]

Habitat: Leadplant is found in the eastern regions of the Black Hills in low to mid elevation prairies where it is closely associated with big and little bluestem grasses, while False indigo is infrequent and restricted to moist stream banks or open woodlands on the eastern and southern perimeters of the Black Hills (Larson and Johnson 1999:514). Both plants grow at Wind Cave National Park (Pisarowcicz 2001h:1, 2001j:1).

Uses: Each of these plants had multiple applications among the tribal nations who were reported to have used them.
[food] The Lakotas made a leaf tea from the leadplant for culinary uses (Gilmore 1919: 93).

[medicinal] The Omahas and probably the closely related Poncas dried leadplant leaves and blew them on cuts and open wounds. The twigs were cut and burned as "moxa" on the skin to treat neuralgia and rheumatism (Gilmore 1919: 93).

[symbolic & ceremonial] The Lakotas mixed the crushed leaves of the leadplant with buffalo fat for smoking (Gilmore 1919:93). Joseph Nicollet (in Bray and Bray 1976:117) reported in the late 1830s that this was one of the plants that Dakotas used to attract bison.

[art & manufacture] The Lakotas and other tribes fashioned their arrowshafts from the straight stalks of the leadplant (Buechel 1970:658), and the Kiowas made bedding material from the false indigo (Vestal and Schultes 1939:31).

Fagaceae
The Beech Family

The Bur oak, *Quercus macrocarpa,* is the only tree reported from this family in the Black Hills. It is typically found amidst stands of ponderosa pines and also on sandy loam prairies (Johnson and Larson 1999: 258).

Names:

Cheyenne (Hart 1981:26)
vo?ome-oo?meshe [no translation given]

Comanche (Carlson and Jones 1939:524)
pasapeni [no translation given]

Lakota (Buechel 1970:508; Rogers 1980:48)
u'tahu can [acorn tree]

Plains Apache (Jordan 1965:76)
socilici^e [star brush]

Ponca (Gilmore 1919:75)
tashka-hi [no translation given]

Habitat: Bur oak are common at low to mid elevations in the eastern Black Hills along streams and at the edge of meadows (Larson and Johnson 1999: 516). They grow at Wind Cave National Park (Pisarowicz 2001f: 1).

Uses: This tree had important uses as food and medicine for the tribal nations in the region.

[food] Oak acorns were an important food staple of the Lakotas, Comanches, Poncas, and Cheyennes (Gilmore 1919:75; Carlson and Jones 1939:524; Grinnell 1972:1:248). The bitterness of the nuts was extracted through a leaching process (Gilmore 1919: 75). The Lakotas ground the acorns into a meal for soups and mush (Hassrick 1964: 156,180; Brown 1992:12).

[medicinal] Lakotas boiled the bark in a decoction to treat lower intestinal ailments, particularly in children (Gilmore 1919:75).

[art & manufacture] The Plains Apaches used this and other oaks as a supporting frame for their brush arbors, meat drying racks, and cooking tripods, and oak charcoals were employed in making black pigment for painting designs on artifacts (Jordan 1965:77). The Lakotas made a yellow dye from the decayed bark of the oak (Lyford 1940:42).

[fuel] The Plains Apaches considered all oaks, including bur oak, a good fuel source because they burned well and produced ample coals (Jordan 1965:155). Oak was also used by the Lakotas to fuel their fires (Bordeaux 1929:155).

Grossulariaceae
The Grossularia Family

Ribes spp.
[currants and gooseberries]

The *Ribes* subfamily includes a great variety of woody plants which bear edible berries that are highly valued by the tribal nations in the region. Six different species of currant are located in the Black Hills, including *R. americanum* [black currant], *R.aureum* [golden or buffalo currant], *R. cereum* [western red or waxcurrant], *R. hirtellum* [hairy-stem gooseberry], *R.lacustre* [swamp or prickly currant], and *R.oxyacanthoides* [Canadian or northern gooseberry]. *R. missouriensis* [Missouri gooseberry] is not found in the area, although it is often confused with some of the species native to the area (Larson and Johnson 1999:516-517). All of these were mentioned in the journals and reports of early expeditions to the Hills (Newton and Jenny 1880: 316; Donaldson in Krause and Olson 1974: 61).

Names:

Cheyenne (Grinnell 1972:2:175; Hart 1981:26-27)
eshko' vi ta si'-mins [thorny heart-shaped berry]
*R. setosum**
alternate: *heskove-hestaohtse-menotse* [thorny branch berry]
mo e' eta tsi' [elk heart-shaped]
R. lacustre
mah' ki mins [little berry]
R. cereum
alternate: *ma?ke-menotse* [red berry]
e hyo' wa ta si' mins [yellow heart berry]
R. aureum
alternate: *heove-hestaohtse-menotse* [yellow branch berry]
soh' k o ta si'mins [slender heart-shaped berry]
R. americanum
alternate: *heso?xo-hestaohtse-menotse* [slick branch berry]

Comanche (Carlson and Jones 1939:524)
huabeko: [no translation given]

Kiowa (Vestal and Schultes 1939:29)
awdl-kno-bawg [no translation provided]
R. odoratum

Lakota (Densmore 1918:438; Gilmore 1919:84; Buechel 1970:127,577,814; ; Rogers 1980: 58)
wica gnaska [male frog]
R. aureum
alternates: *wica gnaska tonka* [large male frog]
wica gnaskahu [male frog stem]
wazi'wica'gnaska [pine gooseberry]
R. cereum
mini' wica'gnaksa [water gooseberry]
R. lacustre
capce'yazala [beaver takes it in its mouth]
R. americanum

Ponca (Gilmore 1919:84)
pezi [female gooseberry]
G. missouriensis
Pezi nuga [male gooseberry]
R. americanum

Habitat: Black currants are occasional along low elevation stream banks and moist ravines (Larson and Johnson 1999:518). Golden currents are common at low elevations mainly in foothills near wood borders, fences and in open areas. Swamp currant are infrequent and localized at mid to high elevations in the northern and central Black Hills (Ibid:522); and red currant are frequent in open pine forest and forest openings at all elevations, but most commonly in the southern Black Hills (Ibid: 520). Hairystem gooseberry is found only occasionally in the Hills along streams and moist forest habitats at mid to high elevations, whereas the Northern gooseberry is frequently found at all elevations in meadows, canyons, rocky slopes, and open environments under dry and moist soil conditions (Ibid: 520, 522). Only the golden currant is reported at Wind Cave National Park (Pisarowicz 2001i:1).

Uses: All of the tribal nations in the region ate the berries from various species in the *Ribes* subfamily, and many used the bushes for other applications as well (Kindscher 1987:196-98).

[food] One of the numerous berries used as food by tribal nations in the northern Plains. Probably all currants were taken, especially in emergency situations, but the golden currant and black currant were the ones most actively sought after for food. The Lakotas ate many varieties of currants. They dried and packed gooseberries in parfleches and made a mush from them that was reputed to be very tasty (Bordeaux 1929: 132; Hassrick 1964: 179; Standing Bear 1978: 59, 1988: 11-12; Brown 1992:12). The Cheyennes also ate a variety of gooseberry and currant species fresh and in a dried form (Grinnell 1972:2:175; Hart 1981:26-27), and the Kiowas made jellies from them (Vestal and Schultes 1939:29). The Hidatsas ate them fresh and sometimes dried them in mixtures with juneberries (Nickel 1974:72). The Plains Apaches also gathered and ate many different *Ribes* species (Jordan 1965:49). Currants remain popular among European Americans and American Indians too for making jams and jellies, pies, and preserves (Eastern Custer County Historical Society 1967-70: 40, 402, 425, 583; Kindscher 1987:196-198).

[**medicinal]** Black currant roots were used by the Poncas to treat uterine disorders (Gilmore 1919:84). The Kiowas believed that snakes feared this plant and kept away from it, so they employed it as an antidote in their snakebite treatments (Vestal and Schultes 1939:29). The Arapahos took *A. cereum* as an emetic (Nickerson 1966:48). The Shoshones made a poultice from the inner bark of *R. aureum.* Tribes outside the Black Hills region had many additional medicinal uses for *Ribes* species (Kindscher 1992:275-276)

[cosmetic & hygienic] The Hidatsas mixed the juice of *R. americanus* with clay in a paint that men used for personal adornment (Nickel 1974:72).

[art & manufacture] The Lakotas made arrowshafts from golden currant stems (Densmore 1918:438; Buechel 1970: 577, 589; Standing Bear 1978:20) and so did the Cheyennes (Curtis 1907-30:6:56; Grinnell 1972:1:179).

Oleaceae
The Olive Family

Fraxinus pennsylavanica [green ash] is the only species from this family reported in the Black Hills. It is an important tree, symbolically and ceremonially, for the tribal nations of the region.

Names:

Lakota (Buechel 1970:446; Rogers 1980:52)
pse'htin can [ash tree, colloquially a pipe]

Plains Apache (Jordan 1965:155)
cildilg ∂o.ce. [wood splits easy]

Ponca (Gilmore 1919:108)
tashnanga-hi [no translation given]

Habitat: This is a common tree at low elevations throughout the Black Hills, where it is typically located along streams (Larson and Johnson 1999:524). It is also abundant outside the Black Hills along woody floodplains and stream banks (Johnson and Larson 1999: 260). It grows at Wind Cave National Park.

Uses: This tree was not only important as a source of wood for manufacturing a wide variety of different items, but it was also significant in the ceremonial observances of local tribes.

[symbolic & ceremonial] The ash tree is associated with many sacred properties. The Cheyennes made whistles for their contrary dances from ash wood, and they employed it in the construction of their Sun Dance lodges (Grinnell 1972:2:81; Hart 1992:20). The Lakotas made a wand for the *otiyotipi* to use when they selected people to sit with them (Walker 1982:22), for wooden plates used in the *Pte San lowampi* (Fletcher 1883c: 266), and also for whistles played in the grassdance (Densmore 1918: 471). Black Elk (in DeMallie 1984:321) pointed out that when Lakota men were chosen to be *akicita*, they were told: "You will resemble the ash. You have noticed it cannot be broken. It is up to you to look after the people and take care of the laws."

[art & manufacture] As reported by James Walker (1982:31), a Lakota tradition tells that:

> once upon a time the people tried all the wood of every kind of a tree and they found that the wood of the ash was the most durable and strongest. So they made the ash the emblem of the marshals and the marshals made all their wooden utensils and implements of ash.

For the Lakotas and most other tribes in the northern Plains, ash was the primary wood for making pipe stems (Gilmore 1919:108, 1987: 06; Buechel 1970:446; Standing Bear 1988:99), and it was favored as well for making bows (Hassrick 1964:198; Standing Bear 1988:20). Also, the young stems of the green ash furnished the material for arrowshafts (Gilmore 1919:108). The Lakotas and Cheyennes relied on ash wood to fashion a variety of other items, including tipi pins and pegs, drums, and meat drying racks (Curtis 1907-30:6:156; Gilmore 1919:108; Hart 1981:20). The Lakotas also used burnt ash wood to produce a black coloration in their paints (Bordeaux 1929:182). The Hidatsas made wedges, corn mortars, and travois hoops from this tree (Nickel 1974:64).

[fuel] The Hidatsas, Lakotas, and Plains Apaches reported that this tree provided a good long-lasting fuel (Bordeaux 1929:155; Jordan 1965:155; Nickel 1974:64).

Pinaceae
The Pine Family

Larson and Johnson report four species of pine in the Black Hills, *Picea glauca* [Black Hills spruce], *Pinus contorta* [lodgepole pine], *P. flexis* [limber pine], and *P. ponderosa* [Ponderosa pine] (Larson and Johnson 1999: 524-528).

Names:

Cheyenne (Hart 1981:6)
hooxe?e [no translation given]
P. contorta
Shestoto?e [no translation provided]
P. ponderosa

Lakota (Buechel 1970:575; Rogers 1980:25)
wazi [generic]
and specific to *P. contorta*
wazi'haka [real pine]
Picea glauca
wazi' can [pine wood]
P. pondersa

Ponca (Fletcher and La Flesche 1972: 107)
Ma'ci [real pine]
Picea glauca

Habitat: The Black Hills spruce is typically found on the cool and moist, north facing slopes at mid to high elevations over an area that extends from Custer to Spearfish (Larson and Johnson 1999:524). The lodgepole pine occurs as an isolated stand in a small area of Lawrence county, and limber pine is also restricted to a small area of the Black Hills south of Harney's Peak (Ibid: 526). Ponderosa pine is the dominant tree, growing over the entire Black Hills from the foothills to the highest mountains (Ibid: 528). Only the ponderosa is reported at Wind Cave National Park.

Uses: The various species of pine were used for multiple purposes by tribes in the region.

[food] Lakotas used the resin from the bark of Black Hills spruce and the ponderosa pine as a chewing gum (Buechel 1970:574,799; Saka Sni Win n.d.: 15), and the Cheyennes did the same with the ponderosa pine (Hart 1981:6). The Cheyennes also ate the seeds from this pine (Hart 1992:57). Larson and Johnson (1999:524,528) report other food uses of the Black Hills spruce and also the Ponderosa pine, but they do not give their tribal attributions: these include using the inner bark for flour or eating it fresh in the spring, boiling the young shoots or cones for emergency food, and brewing the ponderosa pine needles in a tea.

[medicinal] Cheyennes used ponderosa resin in an ointment to treat sores and scabby skin (Hart 1981:6).

[cosmetic & hygienic] Cheyenne men attached ponderosa gum to locks of hair in certain older hairstyles (Grinnell 1972:1: 54).

[art & manufacture] Larson and Johnson (1999: 524, 526) note that early explorers and ethnographers reported Indians visiting the Hills to collect spruce wood for tipi poles, and of course the lodgepole pines, which were the classic pine for this use (Hart 1981:6; Brown 1992:12). Standing Bear (1975:16-17), however, describes in great detail how the Lakota gathered and processed ponderosa for tipi poles in the vicinity of the Buffalo Gap, and Black Elk (in DeMallie 1984:157) described this process in the Black Hills above Rapid Creek. The Cheyennes and Lakotas used ponderosa pine gum in making their war and Sun Dance whistles (Grinnell 1972:1:204; Hart 1981:6; Whiteman in Schwartz 1988: 53; Standing Bear 1988:172). The Lakotas gathered a resin from the ponderosa pine that they boiled to produce yellow dyes (Buechel 1970:134), while the Cheyennes are reported to have used the roots in making a blue dye (Hart 1981:6). The Black Hills spruce was probably the pine species, only found in the Black Hills, whose roots went into the making of a yellow dye (Lyford 1940:42).

[fuel] The wood from various species of pines undoubtedly fueled the fires of local tribes, but it was probably not considered very desirable because it burns rapidly and sends off sparks. The Lakotas, however, used pine pitch shavings as a fire starter (Bordeaux 1929:155).

[symbolic & ceremonial] Even though the specific species is not identified, Francis Densmore (1918: 79) mentions that pine was the tree for making the poles where spirit bundles hung. Pine trees are widely associated in Lakota storytelling tradtions with *Waziya*, Old Man Winter, and his grandson,

Waziyata, The North Wind (Afraid of the Bear in Walker 1980: 200-201; Blue Thunder in Walker 1980: 208; Bad Wound in Walker 1980: 210; Walker 1983: 125, 136, 194, 201, 208). In fact, these two names are often translated as "Towards the Pine." The Cheyennes used ponderosa pine resin in their love medicines (Hart 1981:6).

Ranunculaceae
The Buttercup Family

Clematis ligusticifolia [western virgin's bower or white clematis] is the only woody *Ranunculaceae* species reported in the Black Hills, where it is located in woods and thickets along low to mid elevation stream banks in dry and sandy soil (Larson and Johnson 1999:528). The Lakotas called it *cuniyuwi o'wicak'o* [flowers crowd on vine] or alterrnatively *cani'yuwi skaska' nahca* [white blooming flower vine] (Buechel 1970:119,134,415; Rogers 1980:55), and they prepared a tea from its roots as a headache remedy and also a medicinal wash (Buechel 1970:119). Arapahos and Shoshones used the stems for string and made a shampoo from the roots (Nickerson 1966: 46). Modern European American herbalists also use it to treat headaches (Tilford 1997: 191).

Rhamnaceae
The Buckthorn Family

Closely related to the popular New Jersey tea, *Ceanothus Americanus*, of American Indians and European American settlers along the East Coast (Kundscher 1987:78), the Inland Ceanothus [*Ceanothus herbaceous*], also known as "redroot," went into a culinary tea and a medicinal tonic in the West (Tilford 1997:126). The dry leaves of another variety, *Ceanothus fendleri*, were used for the same purposes. The Inland Ceanothus is common to the rocky soils and open ponderosa forests of the northern Black Hills. The Fendler Ceanothus is found primarily in the western Black Hills and their high limestone and sandstone reaches (Larson & Johnston 1999: 530), but it is also present at Wind Cave National Park (Pisarowicz 2001k:1). The Poncas knew *C. americanus* as *tabe-hi* [no translation given] (Gilmore 1919:10) and used its knarled roots to start fires on their buffalo hunts when timber was scarce. The *C. fendleri* species was called *unpan' tawote* [female elk food] by the Lakotas who prepared a nourishing tea from its leaves (Buechel 1970:507; Rogers 1980:56).

Rosaceae
The Rose Family

Many of the most prized fruits for Plains Indians come from the Rose family, and most of the twelve woody species reported in the Black Hills have names and/or uses among the tribal nations of the region.

***Amelanchiera* spp.**
[serviceberry]

A. alnifolia [Saskatoon serviceberry], also known as Juneberry, grows under a wide range of conditions in the northern Plains and the Black Hills. This was another fruit-bearing bush that was described as abundant in the Black Hills in the 1870s (Newton and Jenny 1880: 316; Donaldson in Krause and Olson 1974: 61). Along with *A. humilis* [low serviceberry], it remains an important and popular source of food for American Indians and European Americans alike (Larson and Johnson 1999:532-534).

Names:

Cheyenne (Grinnell 1972:2:176; Hart 1981:34)
he-tan-i-mins [male berry]
alternate: *hetane-menotse*

Lakota (Buechel 1970:589; Rogers 1980:56)
wi'panzukan [refers to a thing to crack bones]

Ponca (Gilmore 1919:87)
zhon-huda [gray wood]

Habitat: Saskatoon serviceberry is abundant in the Black Hills and located across a wide range of habitats with well-drained soil, while the low serviceberry is commonly found in wooded habitats. Both bear fruit from late June to early August (Larson and Johnson 1999:532-534). The Saskatoon variety is reported at Wind Cave National Park.

Uses: Serviceberries were valuable as a source of food, but they also had other uses for tribes in the region.

[food] Serviceberries rank as one of the most important and prized foods for the tribal nations of the northern Plains, who typically pounded the berries into bison meat and dried them in pemmican cakes (Bordeaux 1929:132; Gilmore 1987:35; Hart 1992:8). Arapahos, Cheyennes, and Lakotas gathered the fruit in abundant quantities to dry and store for winter use and for ceremonial meals (Nickerson 1966:48; Hassrick 1964:179; Grinnell 1972:2:176; Brown 1992:12). The Hidatsas commonly mixed serviceberries with breadroot, bone grease, and broth (Nickel 1974:58). The Cheyennes made a tea from the leaves to serve as a beverage (Grinnell 1972:2:176; Hart 1981: 34). Today, Lakotas preserve the fruit either through canning, drying, or freezing and use it to make pemmican and puddings especially for use at ceremonial feasts (Albers 1966-1976).

Serviceberries were also an important trade item between tribes and with European Americans. The Arikaras exchanged two measures of shelled corn for one measure of dried serviceberries in their trade with neighboring tribes (Gilmore 1919:91).

European American explorers, trappers, and traders commonly relied upon Juneberries for food in their travels. Along with early settlers, they not only picked the berries but also acquired them through trade with local tribes. The berries remain a popular fruit among European Americans who prepare them in jams, jellies, and pies for home use and commercial sale (Eastern Custer County Historical Society 1967-70:40, 402,425,583; Fall River County Historical Society 1976: 119,243; Sundstrom J. 1977:227,339; Kindscher 1987:31-32).

[medicinal] The Cheyennes were also reported to brew the leaves in tea for medicinal purposes (Grinnell 1972:2:176), and they mixed the leaves with medicines to make them more palatable to children (Hart 1981:34).

[art & manufacture] The Lakotas used the wood stems to make arrowshafts and hoops or *tahuka cangleska* (Densmore 1918: 438; Gilmore 1919:87; Hassrick 1964:196; Buechel 1970:474, 589). The Hidatsas made fish traps from the stems (Nickel 1974:58). The Lakotas also prepared a red dye from the berries of this bush (Lyford 1940:42).

Cerocarpus montanus **[alderleaf mountain mahogany]**

This shrub is restricted to chaparral-like stands that are located in the southern reaches of the Black Hills (Larson and Johnson 1999:534) and at Wind Cave National Park. Larson and Johnson (1999: 534) claim that the seasoned wood of the mahogany is very hard and functions as a desirable firewood, but there are no reports on its names and uses for the tribal nations who occupied the region.

Crataegus chrysocarpa **[northern hawthorn]**

Local tribes used various species of hawthorn, but only the northern hawthorn is reported in the Black Hills (Larson and Johnson 1999: 536).

Names:

Cheyenne (Grinnell 1972:2:176)
tasi' mins [bear heart-shaped berry]
C. Douglassi

Comanche (Carlson and Jones 1939:521)
tidiamewo: [no translation given]

Lakota (Buechel 1970:334,482,705; Rogers 1980:56)
taspan [generic word for fruit]
taspan' hu [fruit stock]
C. sheridana
mato'taspan [bear fruit]
C. chrysocarpa
taspan'sloslola [soft fruit]
C. uniflora

Plains Apache (Jordan 1965:31)
bakacilta.hi [tree you make arrows for]

Ponca (Gilmore 1919: 87)
taspan [no translation given]

Habitat: This tree is common but restricted primarily to low elevation areas in the northern Black Hills (Larson and Johnson 1999:536). It grows, however, at Wind Cave National Park (Pisarowicz 2001h:2).

Uses: The berries of the hawthorn were taken for food and medicine.

food] Gilmore (1919:87) reports that the fruit was used mostly as an emergency food among the Lakotas and Poncas. Nickel (1974: 61-62) indicates that the Hidatsas ate the fruit fresh but infrequently. The Plains Apaches ate them but in moderation (Jordan 1965:31), and the Comanches consumed them too (Carlson and Jones1939: 521). The Cheyennes collected, dried, and stored the fruit of *C. douglasii* in large quantities for winter use (Grinnell 1972:2: 176).

[**medicinal]** The berries were mixed with medicines by the Lakotas to make them more palatable (Buechel 1970:482), but they are also reported to have unidentified medicinal properties in their own right (Ibid:334). Along with the berries, the flowering branches of this tree have long been used in Chinese and European American folk medicine to treat heart ailments (Tilford 1997:70).

[symbolic & ceremonial] The Arikaras hung the bundles in which they kept their infants' placentas on the branches of hawthorn trees (Gilmore 1930:75).

***Physocarpus* spp. [ninebark]**

Neither of the two ninebark species, *Physocarpus monogynus* [mountain nine-bark] or *P. opulifolius* [common ninebark], reported in the Black Hills, are associated with names or uses in the ethnobotanical literature on the region. The mountain ninebark is abundant but largely restricted to the rocky and wooded areas of the central Black Hills, whereas the common ninebark is frequent in forested areas on the eastern side of the Hills (Larson and Johnson 1999:536-538).

***Potentilla fruticosa* [shrubby cinquefoil]**

Shrubby cinquefoil is most common at mid to high elevations in the central, northern, and western Black Hills (Larson and Johnson 1999: 538). The Cheyennes know it as *o nuhk' ise'e yo* [contrary medicine] or alternatively as *vano?e-moxese-hohp* [sage mint soup]. They made a beverage tea from the leaves and used it as a medicinal protection from enemies. Cheyenne contraries also used the plant to protect their hands from burning when they plunged them into kettles of boiling soup (Grinnell 1972:2:176; Hart 1981:35). European Americans relied on this cinquefoil for various medicinal remedies too (Kindscher 1992:272).

***Prunus Americana* [wild plum]**

The wild plum is widely distributed in the region's native grasslands where it grows along drainage ways and in sheltered areas (Larson and Johnson 1999: 260).

Names:

Cheyenne (Grinnell 1972:2:177; Hart 1981:35)
mak u mins' [great berry]
alternate: *ma?xe-menotse* [big berry]

Comanche (Carlson and Jones 1939:523)
yuseke [early plum]
parawaseke [late summer plum]
kusiseke [fall plum]

Kiowa (Vestal and Schultes 1939:29)
pank-ai-da-lo [sour or thick-rind plum]

Lakota (Buechel 1970:284; Rogers 1980:56)
kan'ta -hu [plum tree]
kansu' [plum stones]

Plains Apache (Jordan 1965:41)
ye.coh [big fruit]

Ponca (Gilmore 1919:87)
kande' hi [plum tree]

Habitat: The wild plum is commonly found at lower elevations in woodlands, valleys, and drainages over the entire Black Hills (1999:540), and it also grows at Wind Cave National Park (Pisarowicz 2001h: 2).

Uses: Wild plum trees provide not only food but also materials for making many different objects for ceremonial and everyday use.

[**food]** This was an important fruit for tribal nations throughout the region. The fruit was eaten fresh, cooked as a sauce, or dried for winter use (Gilmore 1919:87; Bordeaux 1929:132; Carlson and Jones 1939:523; Vestal and Schultz 1939:30; Grinnell 1972: 2:177; Hart 1981:35; Standing Bear 1978: 59, 1988: 111; Brown 1992:12). The Plains Apaches dried plums into small patties, which they called "dog tracks" in English, but today they can them fresh or process them in jams and jellies (Jordan 1965:41). The Hidatsas ate plums fresh and did not process them for later use (Nickel 1974:70). Today, Lakota preserve plums through canning and freezing, and they use them in making puddings for ceremonial feasts (Kemnitzer 1970:75; Nurge 1970:67,82; Lewis, L. 1980: 52). They are also a popular food for European Americans, who use them in making jellies, jams, and syrups (Sundstrom, J. 1977:75; Kindscher 1992: 274).

[medicinal] The Omahas (and Poncas) used the roots to treat abrasions (Gilmore 1919:87), while the Cheyennes mixed the crushed fruits with salt to treat mouth irritations (Hart 1981:35).

[art & manufacture] The Omahas (and Poncas) and the Hidatsas tied the twigs together to make brooms (Gilmore 1919:87; Nickel 1974:70). Lakotas, Hidatsas, and Cheyennes used plum pits in a popular game of chance (Gilmore 1913b:364; Grinnell 1972:1:332; Buechel 1970:284; Nickel 1974:70; Black Elk in DeMallie 1984:325). Lakotas fashioned their bows from the wood of the plum tree when ash was not available (Standing Bear 1988:20).

[symbolic & ceremonial] Among the Lakotas, the stems were made into prayer wands, called *waunyanpi*, which were used for the benefit of the sick (Gilmore 1919: 87). The sprouts of the tree were utilized in making spirit banners for vision questing (Sword in Walker 1980:85), and the withes to make invitation wands for the *Hunka* ceremony (Walker 1982:65). The Cheyennes used the tree's branches in their Sun Dance altar (Hart 1981:5). The Arikaras hung the bundles in which they kept their infants' placentas on the branches of wild plum trees (Gilmore 1930:75).

Prunus pumila **[sandcherry]**

Except when flowering, the sandcherry is an unobtrusive plant in the areas in which it grows (Larson and Johnson 1999: 542). It was not as plentiful as its relatives, the wild plum and the chokecherry, but it was a valued source of fruit.

Names:

Cheyenne (Grinnell 1972:2:177)
muh'-ko-ta-mins [smell from a distance]
alternate: *moxohe?esta-menotse*

Lakota (Buechel 1970:97; Rogers 1980:56)
aun'yeyapi [to put on stem]

Poncas (Gilmore 1919:88)
nonpa tanga [big cherry]

Habitat: The sandcherry is sometimes located in the low foothills of the southern and central Black Hills in sandy or rocky prairie and woodland habitats (Larson and Johnson 1999:540). It is also present at Wind Cave National Park.

Uses: The sandcherry was used primarily as a source of food by tribal nations in the region.

[food] The Lakotas and Poncas dried the fruits for later use and also made them into a sauce when fresh (Gilmore 1913b:364, 1919:88). The Lakotas and Cheyennes had a belief (hence, their name for the plant) that if a person approached sandcherries from the windward side they would be bitter, but coming from the opposite direction, they would be sweeter (Gilmore 1919:88; Buechel 1970:97; Grinnell 1972:2:177; Eastman in Graeber 1978:88,101; Standing Bear 1988:12).

Prunus pennsylvanica **[pin cherry]**

Also known as bird cherry, this small tree is found only occasionally in the moist wooded habitats of the low to mid elevation central and northern Black Hills (Larson and Johnson 1999:542). The Lakotas called it *canpa' kakan* [knock off cherry from tree], but there are no reports of its use (Buechel 1970:122; Rogers 1980:57).

Prunus virginiana **[chokecherry]**

Without question, the chokecherry was the most highly prized fruit eaten by the historic tribal nations of the northern Plains. It is widely distributed in the region and frequently grows in river valleys where it is a typical understory in wooded habitats (Johnson and Larson 1999:262).

Names:

Cheyenne (Hart 1981:35)
menotse [berry]

Crow (Kindscher 1987:177)
malupwa [no translation]

Kiowa (Vestal and Schultes 1939:30)
o-hpan-ai-gaw [no translation]

Lakota (Buechel 1970:122)
canpa'-hu [bitterwood stem]

Plains Apache (Jordan 1965:45)
ze. [fruit or food]

Ponca (1919:88)
nonpa-zhinga [little cherry]

Habitat: The chokecherry is very common in the Black Hills where it is found at all elevations along stream banks, in open woods, and rocky hillside habitats (Larson and Johnson 1999: 542). It is also present at Wind Cave National Park (Pisarowicz 2001h:2).

Uses: The chokecherry was significant not only nutritionally and medicinally, but it also carried important symbolic messages that marked cultural identities and social relationships (Kindscher 1987:178), and as Melvin Gilmore (1919:88) writes, it was widely mentioned in tribal stories, songs, and myths.

[food] Chokecherries were highly esteemed by all tribes in the region, and they made special trips to find the locations where this fruit was abundant (Gilmore 1919:88). Indeed, Jeff Hart (1992: 42) writes that it is probably the most important berry plant for the Cheyennes and their neighbors. Chokecherries are eaten fresh and dried for later use. Historically, these cherries were ground with special mortars and pestles and made into small cakes dried in the sun. They were a principal ingredient in pemmican, a dried mixture of meat, fat, and fruit, which the Lakotas call *wasna* (Gilmore 1913b:364-365; 1919: 88; Bordeaux 1929: 132; Grinnell 1972:2: 178; Nickel 1974:71; Standing

Bear 1975:22, 1978:6, 59, 1988: 111; Brown 1992: 12). Many of the corn-producing tribes in the region combined chokecherries with ground corn meal, a practice also followed by the nonhorticultural groups (Gilmore 1926b: 14; Nickel 1974: 71). The tribal nations of the northern Plains mixed them in a variety of different soups and stews, and today, they are made into a popular pudding among the Cheyennes and the Lakotas, who call it *chanpa'ijapi* or *wo-ijapi* (Albers 1966-1976; Lewis, L. 1980: 252; Hart 1981:36, 1992: 42). Historically, chokecherries were an important part of the trade between the Dakotas and Arikaras (Gilmore 1987:90-91). Today, the Lakotas continue to gather and process chokecherries but with the use of meat grinders and food processors. Many American Indians also can and freeze chokecherries and prepare them as jams, jellies, and syrups (Albers 1966-1976; Nurge 1970:67, 82; Lewis, T. 1990: 155). Needless to say, this fruit also became a favorite for European American settlers in the region, and they now use it regularly in making butters, jams, jellies, syrups, and pies (Eastern Custer County Historical Society 1967-70: 40, 402, 425, 583; Fall River County Historical Society 1976:119, 243; Sundstrom, J. 1977:227, 365, 379).

[medicinal] Several tribal nations, including the Poncas and Cheyennes, brewed a tea with chokecherry bark to treat diarrhea, dysentery, and other intestinal ailments (Gilmore 1919:89; Hart 1981:36, 1992:43). The Crows cleansed sores and burns with a preparation made from the bark, while Arikara and Hidatsa women drank chokecherry juice to stop postpartum hemorrhages (Hart 1992:43; Gilmore 1931:74; Nickel 1974:71; Kindscher 1992:71). The Crows and Cheyennes pulverized the unripened berries in a treatment for diarrhea (Hart 1992:43). The bark and fruits of the chokecherry also had many medicinal uses among European American settlers (Kindscher 1972:171; Tilford 1997: 34).

{art & manufacture] The Lakotas and Cheyennes, used the twigs of the chokecherry tree to make arrowshafts (Curtis 1907-30:6:156; Hassrick 1964: 196; Buechel 1970:108; Hart 1981:35; Standing Bear 1988:18). Chokecherry wood was used by the Lakotas to make bows when ash was not available (Standing Bear 1988:20). The Lakotas also made sticks from the branches for poking coals (Buechel 1970:123). The Crows used the wood for tipi stakes and pins, and they mixed the sap with the neck portions of certain animals to produce glue and with clays to make permanent paints for decorating parfleches and shields (Hart 1992:43). Melvin Gilmore (1919:88) reports that Ponca trappers boiled the bark of chokecherry in a solution to clean their traps and to remove the scents of former captives.

[fuel] Crow war parties made their campfires with chokecherry wood because they claimed it made no smoke (Hart 1992:43).

[symbolic & ceremonial] Chokecherries are extremely important ceremonially and are served in various ways at many major religious observances. Among the Lakotas, *wasna*, a mixture of corn, tallow, and chokecherries, is typically served at naming ceremonies. Chokecherry stems were (and still are) placed in a bundle and put in the fork of the sacred cottonwood pole at Sun Dances (Densmore 1918:118; Sword in Deloria 1929; Walker 1980: 178-79; Lewis, T. 1990:53). The Lakotas give Sun dancers a tea prepared from the bark. *Cankpe ijapi*, a boiled pudding thick-ened with flour, is a popular dish the Lakotas serve at feasts and powwows (Al-bers 1966-1976; Kemnitzer 1970:3). A staff made of cherry wood was used in the puberty ceremony for young women (Fletcher 1883c:266-267; Walker 1980:244). Chokecherry branches were part of many Cheyenne ceremonies as well: they went into the making of the Sun Dance altar, and there was one branch for each of the 145 songs sung in the Sacred Arrow ceremony (Hart 1981:36).

***Rosa* spp.**
[wild rose]

There are four varieties of wild rose in the Black Hills, *R. acicularis* [prickly rose], *R. arkansana* [prairie rose], *R. blanda* [smooth rose], and *R. woodsii* [woods' rose]. While the prairie rose is ubiquitous in the surrounding grasslands of the Black Hills, the other varieties favor woodland habitats (Johnson and Larson 1999:264).

Names: In most native nomenclatures, the term for wild rose is used generically, and the various species are not distinguished.

Arapaho (Nickerson 1966:48)
ya no

Cheyenne (Grinnell 1972:2:177; Hart 1981:31)
hih'nin [to pour out]
alternate:*henene*

Lakota (Buechel 1970:398,506; Rogers 1980: 57)
onjin'jintka [stands erect]
alternate *unjinjintkahu can* [stinky upright tree]

Ponca (Gilmore 1919:85)
Wazhide

Habitat: Mostly common at low to mid elevations, both the prairie rose and prickly rose are found on prairie foothills and at woodland edges. The former is also located in dry open forests and roadsides while the later can be sighted in canyons and on rocky slopes or ledges (Larson and Johnson 1999: 545-546). The woods rose is also common and located in the same habitats as the other two but it is also found in stream valleys (Ibid:546). The smooth rose is rare in the region and found in environments similar to the prickly rose (Ibid.). Given their ubiquitous distribution in the Black Hills, it is surprising that none of these rose species are reported at Wind Cave National Park.

Uses: Rose hips are a good source of vitamins A and C. Although they were readily available in the environments in which Plains Indians lived, they were used mostly for medicinal purposes (Kindscher 1987: 203; Hart 1992:62; Larson and Johnson 1999:544).

[food] Wild roses were widely used as an emergency food among American Indians, especially during the winter months (Gilmore 1919:85; Hassrick 1964: 156; Nickel 1974:73; Hart 1981:36, 1992:62; Wilson 1981:106-107; Kindscher 1987:200-204). According to Jeff Hart (1992:62), several tribal nations, including the Cheyennes, had cultural prohibitions against eating them on a regular basis. In historic and modern times, Oglalas boiled rose hips in puddings made for ceremonial events, and the Sicangus used them as a condiment with other foods (Bordeaux 1929:131; Kemnitzer 1970: 73; Brown 1992:12). Although Ethel Nurge (1970:82) reports that at Rosebud they were eaten only by very poor families, Luther Standing Bear (1988:11) fondly recalls how women used to pound the fruits into balls that were considered a tasty delicacy. The Arapahos are reported to have made teas from the bark of *R. woodsi* (Nickerson 1966:48). European Americans preserve and dehydrate the buds to flavor food, they candy the petals, they eat them fresh in salads, and they steep them in teas (Kindscher 1987:203).

[medicinal] Although roses were not an important food source, they were widely recognized for their medicinal properties. The Omahas (and Poncas) and the Cheyennes made a solution from rose hips to treat the eyes (Gilmore 1919:88; Hart 1981:36). The Cheyennes boiled the roots or inner bark for a tea to treat diarrhea and other intestinal disorders (Hart 1981:36), and the Arapahos produced a tea from the petals to heal muscle pain (Nickerson 1966:48). The Crows brewed the roots as a remedy to reduce swelling and to treat sore throats and mouth bleeding. The vapors from this remedy were also sniffed to treat nosebleeds (Hart 1992: 62). Wild roses are also popular in European American folk remedies for a variety of different ailments (Kindscher 1992:192; Tilford 1997:162).

[cosmetic & hygienic] European Americans use the petals for potpourri air fresheners and rose water (Larson and Johnson 1999: 544).

[art & manufacture] The Arapahos are reported to have used the roots to make an orange dye (Nickerson 1966:48).

[symbolic & ceremonial] The bark was peeled and dried for tobacco mixtures (Gilmore 1919:88). The Arikaras also hung their infants' placenta bundles on rose bushes (Gilmore 1930:75). A song Melvin Gilmore (1919:86) published suggests that roses were placed on a Lakota woman's dress at the time of her marriage. Gilmore (1987:200-203) also relates a story of unreported tribal attribution about the prairie rose in which a demon wind blows other flowers away to decorate the robe of mother earth, and only the prairie rose is strong enough to withstand him.

Rubus idaeus
[red raspberry]

This raspberry and the related *R. occidentalis* [black raspberry], which is found at the far eastern edge of the prairie zone, were not among the major sources of fruit for tribal nations in the region. Still, their fruits were highly prized (Kindscher 1987:205-208).

Names:

Cheyenne (Grinnell 1972:2: 177; Hart 1981:36)
mohk' tahwiske e' mins [black heart-shaped berry]
alternates: *ma?xe-veshkee?ehe-menotse*
mo?ohtaa-veshkee?ehe-menotse
wis ke e'mins [heart-shaped berry]

Lakota (Buechel 1970:475; Rogers 1980:57)
takan' hecala [stem like sinew]

Plains Apache (Jordan 1965:49)
'idakxah [no translation provided]

Ponca (Gilmore 1919:84)
agthamungi [no translation given]
R. occidentalis

Habitat: Red raspberries are widely located from mid to high elevations in aspen and birch woodlands or streamside woods over the entire Black Hills (Larson and Johnson 1999:548), and they are also reported at Wind Cave National Park (Pisarowicz 2001j: 2).

Uses: Raspberry bushes were used primarily for their culinary and medicinal benefits.

[food] The Cheyennes ate black and red raspberries fresh when in season and dried them for winter use (Grinnell 1972:2:177). The Plains Apaches ate them fresh, and today, they make jam and jelly from them (Jordan 1965: 49). The Dakotas steeped the young leaves of black raspberries to make a drink similar to tea (Gilmore 1919:85). This was probably true for the Lakotas who ate the berries too (Buechel 1970:475), but they probably found the red rather than the black varieties in the locations where they lived. This species is popular among local European Americans for making jams and jellies (Eastern Custer County Historical Society 1967-70:40, 402, 425, 583).

[medicinal] The Omahas (and probably Poncas) used raspberry roots in a treatment for childhood bowel problems (Gilmore 1919:84), and the Plains Apaches made a decoction from the roots for diarrhea and stomachaches (Jordan 1965:129). In European American folk medicine, raspberry leaves were brewed in teas to treat female reproductive disorders (Tilford 1997: 122).

Rubus Parviflorus
[thimbleberry]

This fruit does not flower or set fruit as productively in the Black Hills as happens in other mountain regions of the west. It is common to the areas where it grows, but these are restricted to moist, shady locations from mid to high elevations in the northern Black Hills (Larson and Johnson 1999:548). Although a major source of food for tribal

nations of the greater Northwest, it was not as important for tribes in the Plains region. There is hardly anything about them in ethnobotanical sources from the region. No doubt, all tribes in the area took the fruit opportunistically when it was available.

Rubus Pubescens
[creeping or dwarf red blackberry]

The Creeping blackberry grows in the moist environments of the mid to high elevation central and northern Black Hills. The fruit is too sparse to be of any significance as a food (Larson and Johnson 1999:55). There are no reports on its names and/or uses in the ethnobotanical literature for the region.

Sorbus scopulina
[mountain ash]

Another species currently in decline, the mountain ash, is restricted to the northern Black Hills. While its fruits are cooked for jam and jellies by European Americans, no names or uses for it have been reported in ethnobotanical sources on the tribal nations of the region (Larson and Johnson 1999: 550).

Spiraea butulifolia
[wild spiraea]*

This species is also restricted to the northern Black Hills, where it is widespread from high to mid elevations on coniferous, birch, and aspen forestlands (Larson and Johnson 1999:552). Known to have analgesic properties, this shrub was used by tribes outside the area for medicinal purposes and also by European Americans as an anti-inflammatory (Tilford 1997:96; Larson and Johnson 1999:552). There are no reports on it, however, for tribes who lived and traveled in the Hills.

Salicaceae
The Willow Family

The willow family contains many different trees that had significant benefits for the tribal nations of the region.

***Populus* spp.**
[poplar]

In this family, two species of cottonwood, one poplar, and one aspen are reported in the Black Hills. *P. deltoides* [plains cottonwood] is a major and much revered tree in the northern Plains that typically grows along floodplains and major drainages (Johnson and Larson 1999:264). *P. angustifolia* [narrowleaf cottonwood] is more common in regions to the west of the Black Hills, and as a result, the tribal nations who inhabited the northern and central Plains were less familiar with it. It is the variety reported at Wind Cave National Park (Pisarowicz 2001f:1). *P. balsamifera* [balsam poplar], also known as Balm-of-Gilead because of its fragrant resin, is uncommon in the region (Larson and Johnson 1999:554), while *P. tremuloides* [quaking aspen] is common but restricted to high elevation locations in the Black Hills and at Wind Cave National Park (Pisarowicz 2001f:1).

Names:

Cheyenne (Grinnell 1972:2: 179; Hart 1981:36, 37)
mohk wi hio mohk tut tus [robe painters]
P. deltoides
alternate: *xamaa-hoohtsetse*
veshkee?te [no translation given]
P. tremuloides

Kiowa (Vestal and Schultes 1939:19)
ya-hee-hwai [no translation provided]
P. deltoides
alternate: *a'hi'n* [principal tree]

Lakota (Gilmore 1913b: 60; Buechel 1970:118, 127,515,519; Rogers 1980:57, 58)
cani'tazipa [bow tree]
P. tremuloides

canya'hu [wood to chew]
P. deltoides
*According to Reverend Eugene Buechel (1970: 127), the name derives from the fact that horses feed on the bark.
wachina'ca [refers to offspring]
saplings of *P. deltoides*
wa'ga can [wood to strip]
P. sargentii

Plains Apache (Jordan 1965:75)
'ini.li [no translation provided]
P. deltoides

Poncas (Gilmore 1919:72)
maa zho [cotton tree]
P. deltoides

Habitat: *P. deltoides* is a characteristic tree of river floodplains in the northern Plains, and it is very common along riverbeds at lower elevations in the Black Hills (Larson and Johnson 1999:556). *P. augustifolia* is locally abundant in the canyons of the northern Black Hills; and even though *P. balsamifera* occupies many of the same locations, it is uncommon in the region (Ibid:554). *P. tremuloides* is common and found at mid to high elevations throughout the central and northern Black Hills (Ibid:556).

Uses: With the possible exception of the Plains Apaches, who hardly used it (Jordan 1965:75), the cottonwood was an important tree for most tribal nations who once lived in the Black Hills region.

[food] The Lakotas peeled the young sprouts and ate the inner bark, which was known to have a sweet taste (Gilmore 1919:72; Bordeaux 1929:131; Standing Bear 1988:94), and the Cheyennes and Hidatsas did so as well (Nickel 1974:70; Hart 1981: 37). The Cheyennes also made a culinary tea from the bark (Hart 1981:37).

[medicinal] Tribal nations outside the area of the Black Hills used cottonwoods and aspens for medicinal remedies (Hart 1992: 37), but, curiously, there are no reports of such use for local tribes. European Americans were also known to use the cottonwood for various medicinal purposes (Kindscher 1992:270-271). In one European American folk treatment, the buds from the lower branches of the balsam poplar are soaked in alcohol to dissolve the resin, which is used in an anti-inflammatory salve (Tilford 1997: 114).

[veterinary] The Lakotas, Hidatsas, and Cheyennes fed the bark, twigs, and stems of cottonwoods to their horses (Gilmore 1913b:360, 1919:72; Grinnell 1972:1:94-95; Nickel 1974:70; Hart 1981:37; Black Elk in DeMallie 1984: 165, 209; Standing Bear 1988:94-95).

[**art & manufacture]** Among the Lakotas and Cheyennes, dyes for feathers, arrows, and robes were extracted from boiled cottonwood buds. Musical instruments and children's toys were fashioned from the tree's leaves (Gilmore 1919:73; Grinnell 1972:2: 7, 19; Hart 1981:37, 1992:69; Standing Bear 1988:95). The large poles in the Kiowa's summer arbors were made from the cottonwood, and this tree also provided the poles for the tipis in which their ceremonies took place (Vestal and Schultes 1939:19). The Plains Apaches used cottonwood in the absence of cedar to make their tipi poles (Jordan 1965:75). The Hidatsas considered the cottonwood a general purpose wood, and they used its poles in the construction of their earth lodges, corrals, drying stages, tipis, hoe handles, and travois runners (Nickel 1974:70). The Arikaras used cottonwood saplings for making fish traps (Gilmore 1924:120-121). The Lakotas also made their saddles from cottonwood and lined them with buffalo hide, and they used the down from cottonwood pods to fill their buckskin pillows (Standing Bear 1978:21).

[fuel] The Kiowas favored cottonwood for their fuel (Vestal and Schultes 1939:19), and they used smoke-sticks from this tree for their peyote ceremonies. By contrast, the Plains Apaches burned it only when nothing else was available, believing that it burnt too fast and popped badly (Jordan 1965: 156). The Poncas used it to roast clays used in ceremonial painting (Gilmore 1919:72). The

Lakotas burned cottonwood for everyday fires, for the ceremonial fire of the *Pte San Lowanpi* (Walker 1980:244), for tanning hides, heating paints, and whenever they needed to make coals for other purposes (Standing Bear 1988:94,122). The Cheyennes typically made their hearth fire-sticks out of cottonwood, and their upright or twirling stick from greasewood (Grinnell 197:1:54). Aspen also provided firewood for tribes in the northern Plains (Hart 1992:37).

[symbolic & ceremonial] The cottonwood was held sacred by several tribal nations in the region. The trunk of a young tree served as the center pole for Sun Dances and other ceremonies among the Omahas (Gilmore 1919:72), the Cheyennes (Grinnell 1972:2 :229-232,259,287; Hart 1981:37), and the Lakotas (Standing Bear 1978:222; Black Elk in DeMallie 1984:287; Walker 1982:97). According to Luther Standing Bear (1988: 94), "for all ceremonial purposes the cottonwood was favored" among the Lakotas. Its bark was used in the Lakota elk dance and in the rituals of the Owns White society (Black Elk in DeMallie 1984:242-243, 340). It was also brewed into a tea served to the dancers at the Sun Dance (Sword in Deloria 1929: 400. The cottonwood was also featured in Black Elk's visionary experiences (in DeMallie 1984: 109, 130). The Lakotas made a stick from cottonwood on which to hang a buffalo hump as an offering in the Sun Dance (Densmore 1918: 118). The posts of the lodges in which the Lakota *wanagi wicagluha* [spirit keeping] ceremonies were performed were made from cottonwood (Densmore 1918:81). Cottonwood was a symbol of fidelity among the Lakotas, and young girls burnt twigs of the cottonwood to ward off the scheming of *Anog Ite* [Double Faced Woman] who foments infidelity, scandals and strife (Gilmore 1919:72; Walker 1982:52). In earlier times, cottonwoods were favored for Lakota tree burials (Gilmore 1913b:360). Today, Lakotas use cottonwood saplings to construct their sweatlodges, *iInikagapi* (Lewis, T. 1990:47). The Kiowa's origin story tells of the people emerging from a hollow cottonwod (Vestal and Schultes 1939:31).

***Salix* spp. [willows]**

In the Black Hills, there are more than twelve different *salix* species, all of which probably carried some function for the tribal nations of the region. Native names for willow species are largely generic, and with a few notable exceptions, are difficult to match with scientific botanical nomenclatures. *Salix amygdaloides* (peach willow) and *Salix exigua* (sandbar willow) are also widely distributed in moist areas of the surrounding grasslands (Johnson and Larson 1999:266). *S. humilis* [prairie willow], which is an eastern prairie and woodlands species, is not reported for the Black Hills, although it is named by some of the tribes who lived in this region (Kindscher 1992: 194-198).

Names:

Cheyenne (Hart 1981:37)
meno?keo?o [no translation given]
S. amygdaloides

Comanche (Carlson and Jones 1939:524)
ohasehebuv [no translation given]

Kiowa (Vestal and Schultes 1939: 19)
sen-a [no translation provided]
ai-pee-a-'gaw [no translation given]
sen-ya-daw no translation offered]

Lakota (Buechel 1970:32,520; Rogers 1980:58)
cohwan'jica [rich willow]
refers to a low thin willow, probably
S. humilis
cohwan'jica sasa [rich red willow]
S. humilis
cohwanjica' tanka [large willow]
wahpe'popa'can [leaf burst wood]
probably *S. amygdaloides*

wahpe' wizilya [incense leaf]
possibly *S. exigua*

Plains Apache (Jordan 1965: 78)
kasco.ce [drooping limbs]
S. exigua

Ponca (Fletcher and LaFlesche 1972:107)
Thihspan [no translation given]

Habitat: *S. amygdaloides* [peachleaf willow] grows along lower elevation stream banks over the entire area. *S. exigua* [sandbar willow] and *S. lutea* [yellow willow] are both common along streams and wet meadows at low to mid elevations throughout the Black Hills (Larson and Johnson 1999: 564). *S. bebbiana* [bebb willow] is found at mid to high locations in wet or boggy meadows. *S. petioloris* [meadow willow], *S. planifolia* [planeleaf willow], *S. pseudomonticola* [serviceberry willow], *S. scouleriana* [scouler willow], *S. discolor* [pussy willow], and *S. serissima* [autumn willow] are found at mid to high elevations as well but restricted to the northern regions of the Hills. *S.candida* [hoary willow] is located only in the area around Castle Creek (Ibid: 560-570). Various species of willow also grow at Wind Cave National Park (2002c: 1).

Uses: There are numerous generic references to willow in ethnographic and ethnobotanical sources, but particular species identifications are often absent.

[food] The Hidatsas chewed the roots and bark of the sandbar willow as a confection in the spring and early summer (Nickel 1974:73), while the Lakotas cooked the buds with fat (Bordeaux 1929:131).

[medicinal] The bark of all willows and some poplars contains "salicin," a derivative found in present day aspirin; American Indians and European Americans alike recognized the healing effects of this compound (Kindscher 1992:197). The Cheyennes made a tea for diarrhea and other ailments from the peach leaf willow, *S. amygdaloides*, and they used strips of willow bark as tourniquets (Hart 1981:38, 1992:66). The Kiowas chewed willow bark to relieve toothaches, while the Crows cleaned their teeth with it (Vestal and Schultes 1939:19; Hart 1992:67). The Crows also chewed the bark to relieve headaches and induce vomiting (Hart 1992:66), while the Kiowas made a tea from willow leaves to cure pneumonia and treat rheumatism (Vestal and Schultes 1939:19). The ashes from burning willow stems were used by the Comanches in an eye treatment (Carlson and Jones 1939:524,533). European Americans used them for many of the same purposes as well (Hart 1992:66; Kindscher 1992:197; Tilford 1997:164).

[art & manufacture] Tribes throughout the northern Plains and neighboring regions used willow for multiple manufacturing purposes (Kindscher 1992:192). The Cheyennes, for example, drew on willow to make backrests, mats, hoops for catching horses, baby carriages attached to travois, fish weirs, animal traps, handdrums, hide scrapers, stirrups, tipi pegs and pins, and meat drying racks (Grinnell 1972:1:105, 113, 202, 208, 215, 243, 293, 298, 310-11, 2:168; Hart 1981:37-38). Cheyennes, Lakotas, Plains Apaches, and Poncas used willow poles for the frames of their sweat lodges (Gilmore 1919:73-74; Grinnell 1972:2:210; Jordan 1965:79, 81; Standing Bear 1988:80; Lewis, T. 1990:47). The Kiowas and Plains Apaches constructed their arbors from willow, and they wore willow stems on their head as sunshades (Vestal and Schultes 1939:19; Jordan 1965:81-82). The Hidatsas used *S. discolor* as an intermediate roofing material on their earth lodges, and *S. interior* was woven into mats (Nickel 1974:73). Arikaras also laid willow poles on the timbers of their earth lodge roofs before adding a thatch of dry grass and a covering of earth (Gilmore 1987:55). Plains Apaches employed willow bark as lashing material for a wide variety of purposes, and they used the stems for backrests and for the framework of the canopy that shaded an infant's cradleboard (Jordan 1965:81-83). The Lakotas also made whistles out of willow (Standing Bear 1988:171-172).

[fuel] The Cheyennes preferred to use dried willow wood in firing their pottery (Grinnell 1972:1:240-241).

[symbolic & ceremonial] The Cheyennes used willow stems in making hoops for their antelope hunting ceremonies, willow wood to make drums, and willow charcoal to paint their faces when going into battle. They also employed willow products for a variety of ritual purposes in the Sun Dance and in the *Massaum* ceremony (Grinnell 1972:1:284, 2:20, 229-32,3 28-29; Hart 1981:37-38). Willow stems were wrapped around the arms, waists, and legs of Cheyenne Sun Dancers because they were believed to help ward off thirst (Grinnell 1972:2:265, 268, 277). The shavings from the sprouts of red willows were mixed in Cheyenne tobacco mixtures, and they were considered a male plant (Moore, J. 1974a:173).

A similar idea existed among the Utes who used willow branches for various purposes in their Sun Dance. The Utes considered willow a channel of power, a repository of the life force, and thus it played a critical role in their Sun Dance, where it was placed in the crotch of the Sun Dance tree to represent "a nest of water" (Jorgenson 1972:181-184, 267-268).

The Poncas used willow twigs in their funerary practices (Gilmore 1919:74). The willow was connected to water and its purifying and healing qualities. Willow twigs were also used in certain funerary rites of the Arikara (Gilmore 1987:180-181).

The Lakotas put redwillow bark in their tobacco mixtures for various ritual purposes, including the *Hunka* and *Pte San Lowanpi* ceremonies (Finger in Walker 1980:111; Tyon in Walker 1980:119; No Flesh in Walker 1980:194; Blunt Horn in Walker 1980: 202; Bad Wound in Walker 1980:209, 210; Walker 1980:227, 244, 245, 295; Black Elk in DeMallie 1984:372; Standing Bear 1988: 107). Today, red willow remains a basic ingredient in tobacco mixtures used for smoking pipes at *Yuwipi* ceremonies (Kemnitzer 1970:67).

Ulmaceae
The Elm Family

Three species in the elm family are reported in the Black Hills. Except for the Siberian elm, which was introduced to North America from Asia, *Celtis occidentalis* [Hackberry] and *Ulmus americana* [American elm] are named and described in ethnobotanical sources on the region.

Celtis occidentalis
[hackberry]

This tree is most common in the central and southern Plains, but its distribution does reach the southern edge of the Black Hills.

Names:

Kiowa (Vestal and Schultes 1939:22)
ya-ai-gaw [hackberry fruit]
ya-aip-hap [hackberry tree]

Lakota (Gilmore 1913b:362; Buechel 1970:609-610)
yamanumanugapi can [crunching tree]
*so called because animals crunch its berries.

Plains Apache (Jordan 1965: 63)
cediðice [hard seed]

Ponca (Gilmore 1919: 76)
gube [no translation given]

Habitat: This tree is confined exclusively to the extreme southern edge of the Black Hills in the vicinity of Hot Springs, South Dakota (Larson and Johnson 1999:572).

Uses: Hackberries were relied upon mostly for their berries, which were prepared in a variety of ways by tribal nations in the region.

[food] Plains Apaches relished hackberries eaten fresh, as flavoring for pemmican, and mixed with kidney fat to make a candy (Jordan 1965:63). The Lakotas used the fruits as a condiment for seasoning meats (Gilmore 1913b:362). Poncas also ate the

fruits, but they did so opportunistically (Gilmore 1919:76).

[fuel] The Plains Apaches used it for firewood, and the Kiowas valued its wood as fuel for certain ceremonial fires (Vestal and Schultes 1939:22; Jordan 1965:155).

[symbolic & ceremonial] The Lakotas used hackberry wood to make plates for the *Pte San lowampi* (Fletcher 1883c: 266).

Ulmus americanus
[American elm]

This is another major tree in the region. It is typically located along moist stream banks and valley floors, but it can also grow in open grasslands and along rocky hillsides (Johnson and Larson 1999: 266).

Names:

Cheyenne (Hart 1981:39)
homeno?e

Lakota (Buechel 1970: 450; Rogers 1980: 61)
p'e [elm]
alternate:*p'ecan p'eikceka*

Ponca (Gilmore 1919: 75)
ezhon zhon [elm tree]

Habitat: Found in the foothill valleys and along waterways at low elevations, elms are usually mixed with bur oak, green ash, or plains cottonwood, especially on the southern, eastern, and northern sides of the Black Hills (Larson and Johnson 1999:570). This species is also reported at Wind Cave National Park (Pisarowicz 2001f: 1).

Uses: The elm had multiple uses among tribes in the region.

[food] The Cheyennes made a tea from the bark and drank it like coffee (Hart 1981:39).

[medicinal] Cheyennes also gave it to children to insure their stability, and pregnant women drank it in hopes it would impart its effects on their offspring (Hart 1981:39).

[art & manufacture] The Lakotas and other Siouan speaking tribes relied on the elm for making small mortars and pestles used in grinding medicines and perfumes (Gilmore 1919:75). The Lakotas also made their stirups and saddles out of elm wood, and they made drum bands from the wood as well (Standing Bear 1978: 21, 1988:95,98). In a vision, the Lakota Red Thunder is credited with learning to make bowstrings from elm bark (Black Elk in DeMallie 1984:310). The structural timbers of Mandan, Hidatsa, and Arikara earth lodges were fastened with the fibers of elm or basswood (Gilmore 1987:55). The Hidatsas also employed the inner bark for the binding sections of their willow fences (Nickel 1974: 75). European Americans rely on elm wood for making tools, furniture, flooring, barrels, and boxes (Larson and Johnson 1999:571).

[fuel] Elm was a favorite source of fuel among the Lakotas and Poncas (Gilmore 1919:75), and the Plains Apaches considered it good firewood as well (Jordan 1965:156). Rotten elm roots were used with yucca as fire-starters (Mallery 1886:291).

[symbolic & ceremonial] For the Cheyennes, the tree has important ties to their sacred mountain, Bear Butte, at the northern edge of the Black Hills (Hart 1981: 39).

Vitaceae
The Grape Family

The two species in this family reported in the Black Hills, *Partheocissus vitacea* [Woodbine] and *Vitis riparia* [River grape] are associated with names and uses in the ethnographic and ethnobotanical literature.

Partheocissus vitacea
[woodbine]

Also known as false grape, woodbine is closely related to *P. quinquefolia* [Virginia creeper], which was introduced into the Black Hills by European Americans as an

ornamental vine (Larson and Johnson 1999: 572).

Names:

Kiowa (Vestal and Schultes 1939:42)
sa-tai-al-go [paint berries]

Lakota (Buechel 1970: 119; Rogers 1980:61)
cani' yuwi iyececa [like a curly wood]

Ponca (Gilmore 1919:102)
ingtha hazi itai [ghost grapes]

Habitat: In the Black Hills, woodbine is common at low elevations where it climbs along tree trunks, over brush, and rock ledges following local stream banks (Larson and Johnson 1999:572). It grows in ravine and woodland environments at Wind Cave National Park (Pisarowicz 2001h: 1, 2001i: 2).

Uses: A variety of different tribal uses have been reported for this plant.

[medicinal] The Lakotas made a tea from the roots for headaches and also as a medicinal wash (Buechel 1970:119).

[cosmetic & hygienic] Kiowa women painted their skin with a dye made from its berries (Vestal and Schultes 1939: 42).

[veterinary] The Lakotas report that horses liked to eat the leaves (Buechel 1970: 119).

[art & manufacture] The feathers worn by the Kiowas in war dances were dyed in a solution made from the berries (Vestal and Schultes 1939:42).

[symbolic & ceremonial] This plant symbolized warbonnets in the Cheyenne Sun Dance (Grinnell 1972:2:229-232). Although the Hidatsas considered this plant sacred, they apparently did not use it (Nickel 1974:68).

Vitus riparia
[river grape]

This is one of several species of grapes located in the plains. Along with *V. vulpina*, it is a popular source of food for the region's American Indian and European American populations.

Names:

Cheyenne (Grinnell 1972:2:180; Hart 1981:41)
hoh pah tsi na' mins [sticky berries]
alternate: *hopahao?ehe-meno*

Kiowa (Vestal and Schultes 1939:42)
'kodl-ta-pai [wild grapes]

Lakota (Buechel 1970:135;Rogers 1980: 61).
cunwi'yapehe [tree twiner]
V. vulpina
Alternate: *cun'yape*

Plains Apache (Jordan 1965:53)
'idalcal bikosdide.si [long necked grapes]

Ponca (Gilmore 1919:102)
hazi [no translation given]

Habitat: Wild grapes are distributed widely in the Hills along streams from low to mid elevations (Larson and Johnson 1999: 574), but they are not reported at Wind Cave National Park.

Uses: Wild grapes were procured mostly for their food value, but they also had other uses.

[food] The Comanches, Kiowas, Plains Apaches, Lakotas, and Poncas all used the fruit of the wild grape as food, fresh or dried for winter use, and they commonly mixed dried grapes in their pemmican (Gilmore 1919:102; Bordeaux 1929:131; Carlson and Jones 1939:523; Vestal and Schultes 1939: 42; Hassrick 1964:190; Jordan 1965: 52-54; Buechel 1970:135; Standing Bear 1978:59). The Kiowas also used the fruit to make jams and jellies (Vestal and Schultes 1939:42). The Cheyennes and Hidatsas, by contrast, only consumed wild grapes when they were fresh (Grinnell 1972:2:180; Nickel 1974:75;

Hart 1981:41). Today, Lakota people still gather wild grapes and preserve them. They also remain a popular ingredient in *wojape*, a pudding served at ceremonial feasts (Kemnitzer 1970: 73; Nurge 1970:82; Lewis, L. 1990:252). European Americans gather wild grapes to make juice, wine, and jelly (Larsson and Johnson 1999:574).

[cosmetic & hygienic] The Hidatsas made a body paint by combining the juice of grapes with clay (Nickel 1974:75).

[art & manufacture] Plains Apaches made stirrups of grape wood and handles for hide fleshing tools (Jordan 1965:88-89). The Lakotas mixed the leaves with the fruit to make a red dye (Standing Bear 1988:100); the grapes by themselves produced a black dye (Lyford 1940:43; Hassrick 1964:191).