

## FIELD GUIDE TO THE SEDGES OF OREGON AND WASHINGTON

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of the *Carex* Working Group

When preparing the second edition of the Field Guide to the Sedges of Oregon and Washington, we had to remove the *Carex* Ethnobotany section to make room for the additional *Carex* species that had been found in the PNW since publication of the first edition. This text is provided here.

### Carex Ethnobotany

*Carex* have been valued primarily as fiber plants and as forage for livestock. A few species have been used medicinally. *Carex* have been of minor importance as a food source for humans. At present, several species are being sold as ornamentals.

Ethnobotanical reports of *Carex* usage by native people often fail to identify the species used. In many cases, the lack of specificity is appropriate because people applied a single name to all species of similar growth form or use. In some cases, the specific identification provided by ethnobotanists should be read with skepticism.

Sedges have been valued most highly as fiber plants. By in large, sedges are tougher and more flexible than grasses. Leaves have been used to make rope, and leaves and rhizomes are split to make baskets, mats, and clothing. Processing rhizomes for weaving is a complex task. Rhizomes are carefully dug out undamaged. To prevent brittleness, they are kept wet until peeled. The outer layers are removed, leaving a pale core. That core is split, often into very narrow fibers. The fibers are coiled for storage or trade, and moistened before use.

The long, unbranched rhizomes preferred for weaving were produced by cultivating sedge beds in sandy soils with little competing vegetation. Harvesters thinned the plants and removed senescent leaves. Stones and other obstructions were removed and competing plants were thinned. Individuals or families owned the sedge beds, an incentive for using sustainable harvest practices. Traditionally, harvest was limited by season and a given bed might be harvested every two or three years. New sedge beds were planted when the opportunity arose. Selection and transport by Native Americans may have affected the diversity and distribution of favored plants, particularly *C. barbarae*.

Leaves and rhizomes have been put to diverse uses. Bundles of sedges have been used as torches. Sedges have been used as packing for fragile items and to line cooking pits. Sedge leaves were softened by rubbing and used as insoles or insulation for footwear. Roots of one species have been used to produce dye. It is reported that the sharp edges of *C. obnupta* have been used by men for shaving. *Carex* Working Group members are not sure how, or if, that was accomplished. One of the few reports of ritual use that was identified to species involved *Carex nebrascensis*, considered to be the American bison's favorite food.

Sedges seem so nearly lacking in secondary compounds that it is a surprise to learn that some have been used medicinally. Various species have been used as stimulants or to cause vomiting, soothe the digestive system, cause abortion, expel the placenta after birth, or treat certain conditions that are difficult to translate into modern medical usage. Their effectiveness for these purposes is unconfirmed.

Sedges have received little use as human foods. The achenes have some nutrient value, and those of some species have been ground, cooked into a mush, and eaten. However, yields are low and the achenes are small and nested inside the usually indigestible perigynium. Achenes of *C. raynoldsii* and *C. geyeri* are larger and less tough than those of most *Carex*, providing a decent trailside nibble. The orange, succulent, and sometimes vaguely sweet perigynia of *Carex aurea* make another interesting snack. None of these species is common enough or has a high enough yield to be taken seriously as a food source.

*Carex* leaves and rhizomes are high in fiber and low in starch and nitrogen, thus largely indigestible by humans. Bases of the leaves and shoots are relatively succulent and are sometimes eaten, generally raw, in the field. The pith juice has been used as a beverage. Sedges store starch in their rhizomes. Although they are extremely fibrous, rhizomes of the larger species have occasionally been eaten, usually as a last resort to stave off starvation.

Recently, several species of *Carex* have entered the horticultural trade. These include native *C. pansa*, *C. praegracilis*, and *C. tumulicola*, used for lawns because they require less water than traditional lawn grasses, are more resistant to trampling, and require less mowing. Species used as ornamentals include PNW natives *C. bebbii*,

*C. heteroneura*, *C. hystericina*, and *C. nudata*, and a variegated form of *C. pallescens*. Introduced *C. buchananii*, *C. pendula*, and *C. sylvatica* are spreading from gardens and establishing in natural habitats in the PNW.

In this list of species, the people who used the plant in the way listed are in parentheses.

- C. amplifolia*: rhizomes used in basketry (Native Americans in California)
- C. aperta*: hay (Euro-Americans, Portland, OR)
- C. aquatilis*: stem bases eaten raw (Alaskans)
- C. aquatilis* var. *dives*: leaves used to make baskets and strong handles for bags (Hesquiat, Makah)
- C. arenaria*: Seeds and starchy rhizomes (which have greatest starch content in fall) edible by humans, but yields are low. Decoction made from the rhizomes was considered diaphoretic and diuretic, a substitute for sarsaparilla, and used to treat diverse ailments such as syphilis, rheumatism, gout, lung and skin diseases (Europeans)
- C. atherodes*: hay, animal feed (Nlaka'pamux, Euro-Americans); leaves softened by rubbing and used as insoles for moccasins (Nlaka'pamux)
- C. aurea*: perigynia edible when ripe, faintly sweet (*Carex* Working Group)
- C. barbara*: leaves and more importantly the rhizomes used to make baskets (Kashaya, Maidu, Pomo, and all other peoples within its range)
- C. brevior*: compound infusion of the plant taken to aid evacuation of the placenta (Iroquois)
- C. buxbaumii*: rhizomes used in basketry (Native Americans in California)
- C. concinnoidea*: lining for cooking pits, other household uses (Okanogan-Colville)
- C. densa*: cut for hay and fed to livestock (Mendocino Indians)
- C. douglasii*: raw stems eaten (Kawaiisu)
- C. geyeri*: perigynia edible (*Carex* Working Group)
- C. hassei*: rhizomes used in basketry (Native Americans in California)
- C. kobomugi*: packing for porcelain; starchy achenes eaten; used in traditional medicine (Chinese)
- C. lyngbyei*: fodder, hay, silage (Icelanders); rhizomes used in basketry (Native Americans in California); leaves used for weaving (Aleuts, Haida, Squamish, Schelt)
- C. macrocephala*: tincture of achenes used as a stimulant (in Russian Far East)
- C. mendocinensis*: rhizomes used in basketry (Pomo)
- C. microptera*: plant used as a ceremonial emetic (Navajo, Ramah)
- C. nebrascensis*: plant used in Sun Dance and Massaum ceremonies, sometimes tied to horns of bison head or skull (Blackfeet, Cheyenne); rhizomes used in basketry (Native Americans in California)
- C. obnupta*: leaves split and used to make baskets (Hesquiat, Kitinaht, Makah, Nootka, Coast Salish); rhizomes used in basketry but not preferred because of small protuberances along the rhizome (Native Americans in California); foliage softened by rubbing and used as insoles for moccasins (Nlaka'pamux); sharp-edged leaves used by men for shaving (Hesquiat); stems used for food (Salmon River people of the Tillamook); used for animal feed (Nlaka'pamux);
- C. pellita*: rhizomes split and cured for use as the pale buff weft or sewing stitch threads (Pomo)
- C. praegracilis*: hay, on alkaline ranges (Euro-Americans).
- C. raynoldsii*: perigynia edible (*Carex* Working Group)
- C. rostrata*: "bulbs" used for food (Nlaka'pamux); used for animal feed, including hay and silage (Nlaka'pamux, Icelanders);
- C. saxatilis*: forage, hay, silage (Icelanders)
- C. simulata*: rhizomes used in basketry (Native Americans in California)
- C. utriculata*: tender lower parts of stems eaten by children (Gosiute); rhizomes used in basketry (Native Americans in California)
- C. vesicaria*: plants used as rough ropes for handling newly cast pipes (Euro-Americans in Portland, OR); roots used to make a black dye for basketry (Shoshoni); rhizomes used for basketry (Native Americans)
- C. vulpinoidea*: compound decoction of roots used as a "rooster fighting medicine" (Iroquois)
- C. sp.*, unidentified: leaves eaten to induce abortions (Songish); pith juice used as beverage; tuberous base of stem used for food; fresh stems eaten (Klamath); roots used as medicine (Gosiute); leaves made into cleaning brushes (Nlaka'pamux); dried plants tied in tight bundles and used as torches (Pomo); leaves and/or rhizomes used to make baskets, hats, mats, and rope (Costanoan Indians, Klamath, Mendocino Indians, Montana Indians, Pomo, Salish, Wailaki, Yuki).

### Carex Ethnobotany References

- Andrusek, B. 1986 Edible wild plants. *Can. Geographic* 105: 65-70
- Bank, T. P. 1951 Botanical and ethnobotanical studies in the Aleutian Islands. in: *Aleutian Vegetation and Aleut Culture*. *Micigan Academy of Science, Arts, and Letters* 37: 13-30. yes
- Barrett, S. A. 1908 Pomo Indian Basketry University of California Publications in American Archaeology and Ethnology 7: 134-308 yes *Carex barbarae* BLW
- Baumhoff, M. A., and R. I. Orlins. 1979 An Archaeological Assay on Dry Creek, Sonoma County, California. *Contributions of the University of California Archaeological Research Facility, No. 40*. Univeristy of California Department of Anthropology. no *Carex pellita*
- Bean, L. J., and E. G. Hirtle 1974 The Mahilkaune Pomo and Their Neighbors: An Ethno-Historical Study of the Warm Springs Dam and Lake Sonoma Project, Sonoma County, California. Washington, D.C.: U.S. Army Corps of Engineers. no *Carex barbarae*
- Blankinship, J. W. 1905 Native Economic Plants of Montana. Bozemen. *Montana Agricultural College Experimental Station Bulltein* 56 (p. 9) yes *Carex* sp. done
- Bocek, B. R. 1984 Ethnobotany of Costanoan Indians, California, based on collections by John P. Harrington. *Economic Botany* 38: 240-255 (p. 255) yes *Carex* sp. done
- Boyd, R. 1986 Strategies of Indian burinning in the Willamette Valley. *Can. J. Anthropology* 5: 65-77 yes
- Chamberlin, R. V. 1911 The Ethno-botany of the Gosiute Indians of Utah. *Memoirs fo the American Anthropological Association* 2: 331-405 (p. 365) yes *C. utriculata* done
- Chetnut, V. K. 1902 Plants used by the Indians of Mendocino County, California. *Contr. U.S. Nat. Herb.* 7: 295-408 (p. 314-215) yes *Carex densa*, *Carex barbarae* done
- Coville, F. V. 1897 Notes on the plants used by the Klamath Indians of Oregon *Contr. U.S. Nat. Herb.* 5: 87-110 (p. 92) yes *Carex* sp. done
- Coville, F. V. 1904 Plants used in Basketry In: O. T. Mason, ed., *Aboriginal American Basketry*. Report of the U.S.National Museum. Washington, D.C.: Government Printing Office. yes
- Curtin, L. S. M. 1957 Some plants used by the Yuki Indians . . . II. Food Plants. *The Masterkey* 31: 85-94 (p. 93) yes *Carex* sp. done
- Darke, R., ed. 1992 *Manual of Grasses*. The New Royal Horticultural Society Dictionary. Timber Press, Oregon 169 pp. BLW
- Erichsen-Brown, C. 1989 *Mediciinal and Other Uses of North American Plants: A Historical Survey with Special Reference to Eastern Indian Tribes*. Dover, New York, New York
- Farr, D. F., G. F. Bills, G. P. Chamuris, and A. Y Rossman 1989 *Fungi on plants and plant products in the United States*. APS Press, St. Paul (Minnesota, USA) 1252 pp. *Cyperaceae*: pp. 158-166
- Giese, Paula 1996 *Lake Sonoma Dam Drowns Basket Plants* <http://www.kstrom.net/isk/art/basket/warmdam.html>. Accessed November 1 2004. yes *Carex pellita* BLW
- Gifford, E. W. 1967 Ethnographic notes on the southwestern Pomo *Anthropological Records* 25: 10-15 (p. 11-12) yes *Carex* sp. done
- Gill, S. J. 1983 *Ethnobotany of the Makah and Ozette People, Olympic Peninsula, Washington (USA)* Washingto State University, Ph.D. Thesis (p. 330) yes *Carex obnupta* done
- Goodrich, J. and C. Lawson 1980 *Kashaya Pomo Plants*. Los Angeles American Indian Studies Center, University of California, Los Angles (p. 103) yes *Carex barbarae* done
- Gottesfeld, L. M. J. and B. Anderson 1988 *Gitksan traditional medicine: herbs and healing*. *J. Ethnobiol.* 8: 13-33
- Gottesfeld, L. M. J. and B. Anderson 1991 *Plants That We Use: Traiditonal Plant Uses of the Wet'suwet'en People*. Kyah Wiget Education Society, Moricetown, British Columbia.
- Gunther, E. 1973 *Ethnobotany of Western Washington*. Univ. of Washington Press, Seattle, Washington. (p. 22) yes *Carex aquatilis* var. *dives* done
- Hart, J. A. 1981 *The ethnobotany of the Northern Cheyenne Indians of Montana* *J. Ethnopharmacology* 4: 1-55 (p. 7) yes *Carex nebrascensis* done
- Hebda, R. J., and R. W. Mathewes 1984 *Holocene history of cedar and native Indian culttures of the North American Pacific Coast*. *Science* 225: 711-713
- Hedrick, U. P., ed. 1919 *Sturtevant's Edible Plants of the World*. J. B. Lyon Co., Albany, New York
- Heller, C. A. 1953 *Edible and Poisonous Plants of Alaska* Univeristy of Alaska (p. 129) yes *Carex aquatilis* done

- Herrick, J. W. 1977 Iroquois Medical Botany State University of New York, Albany. Ph.D. Thesis (p. 275) yes *Carex brevior*, *Carex vulpinoidea* done
- Jason, D., N. Jason, D. Manning, R. Inwood, T. Perry, and Rohander. 1971 Some Useful Wild Plants. Talon Books, Vancouver
- Johnston, A. 1987 Plants and the Blackfoot Lethbridge, Alberta. Lethbridge Historical Society (p. 22) yes *Carex* sp.
- Kuhnlein, H. V., and N. J. Turner. 1991 Traditional Plant Foods of Canadian Indigenous Peoples. Nutrition, Botany, and Use. Volume 8. In: S. Katz, ed. Food and Nutrition in History and Anthropology. Gordon and Breach Science Publishers, Philadelphia, Pennsylvania.
- Kuneki, N. J., E. thomas, and M. Lockish. 1982 The Heritage of Klickitat Basketry. Portland: Oregon Historical Society Press.
- Laforet, A. 1984 Tsimshian basketry. In: M. Sequin, ed., The Tsimshian. Inages of the Past: Views for the Present. Vancouver: UBC Press.
- Laforet, A. 1990 Regional and personal style in Northwest Coast basketry IN: F. W. Porter, ed., The Art of Native American Basketry: A living Legacy. Contributions to the Study of Anthropolgy, No. 5. New York: Greenwood Press.
- Laforet, A. 1992 Windows on diversity: Northwest coast baskets in the Pitt Rivers collection. In: L. Mowat, H. Murphy, and P. Dransart, eds., Basketmakers. Meaning and Form in Native American Baskets. Monograph 5. Oxford, UK: Pitt Rivers Museum (University of Oxford)
- McClintock, W. 1909 Medizinal- Und Nutzpflanzen Der Schwarzfuss Indianer Zeitschrift fur Ethnologie 44: 273-279 (p. 277) yes *Carex nebrascensis* done
- McCutcheon, A. R., S. M. Ellis, R. E. W. Hancock, and G. H. N. Towers. 1992 Antibiotic screening of medicinal plants of British Columbian native peoples. J. Ethnopharmacology 37: 213-223
- Merril, R. E. 1923 Plants used in basketry by the California Indians Calif. Univ. Pub., Amer. Archeol. And Ethnol. 20: 215-242 yes
- Moerman, D. 1998 Native American Ethnobotany Timber Press: Portland, Oregon Website <http://herb.umd.umich.edu> yes
- Morice, Father A. G. 1892-1893 Notes Archaeological, Industrial, and Sociological on the Western Denes with an Ethnographical Sketch of the Same Transactions of the Candian Institute, Session 1892-1893
- Murphey, Edith Van Allen 1990 Indian Uses of Native Plants Glenwood, Illinois. Meyerbooks. Originally published in 1959 (p. 6-8) yes *Carex exsiccata*, *Carex mendocinensis* done
- Murphy, E. V. 1959 Indian Uses of Native Plants Mendocino County Historical Society, Fort Bragg, California
- Norton, H. 1979 The association between anthropogenic prairies and important food plants in western Washington. Northwest Anthropological research Notes 13: 175-200
- Ortiz, B. 1993 Contemorary California Indian Basket-weavers and the environment. in: T. C. Blackburn and M. K. Anderson, eds., Before the Wilderness. Envirnomental Management by Native Californians. Menlo Park, California: Ballena Press.
- Ortiz, B. 1993 Pesticides and basketry. News from Native California. Skills and Technology summer, 1993: 7-10
- Palmer, G. 1975 Shuswap Ethnobotany Syesis 9(2).  
People of 'Ksan 1980 Gathering What the Great Nature Provided: Food traditions of the Gitksan. Douglas & McIntyre, Vancouver/University of Washington Press, Seattle.
- Porter, F. W. 1990 The Art of Native American Basketry. A Living Legacy. Contributions to the Study of Anthropolgy, No. 5. New York: Greenwood Press.
- Schlick, M. D. 1994 Columbia River Basketry. Gift fo the Ancestors, Gift of the Earth. Seattle: University of Washington Press.
- Secwpebec Cultural Education Society 1996 Technology of the Shusqap Shuswap Cultural Serices, Book 5. Kamloops, B. C.: Secwpebec Cultural Education Society.
- Simpson, D. A., and C. A. Inglis. 2001 Cyperaceae of economic, ethnobotanical, and horticultural importance: a checklist. Kew Bull. 56: 257-360 !yes
- Steedman, E. V. 1928 The Ethnobotany of the Thompson Indians of British Columbia SI-BAE Annual Report # 45: 441-522 (p. 514) yes *Carex rostrata*, *Carex* sp. done

- Stevens, M. L. 1999 The ethnoecology and autecology of White Root (*Carex barbarae* Dewey): implications for restoration. Ph.D. dissertation, University of California at Davis. Ann Arbor, Michigan University Microfilms. yes *Carex barbarae*
- Suttles, W., ed. 1990 Northwest Coast, Vo. 7, Handbook of North American Indians. Smithsonian Institution, Washington, D.C.
- Swartz, Jr., B. K. 1958 A study of material aspects of Northeastern Maidu basketry Kroeber Anthropological Society Publications 19: 67-84 (p. 71) yes *Carex barbarae* done
- Sweet, M. 1962 Common Edible and Useful Plants of the West Naruregraph Combpany, Healdsburg, California
- Szczawinski, A. F., and N. J. Turner 1978 Wild Green Vegetables of Canada. Edible Wild Plants of Canada Series No. 4, National Museum of Canada, Ottawa
- Turner, N. C. and M. A. M. Bell. 1971 The ethnobotany of the Coast Salish Indians of Vancouver Island, I and II. Economic Botany 25: 63-104, 335-339 (p. 73) yes *Carex* sp. done
- Turner, N. J. 1975 Food plants of British Columbia Indians Part 1: Coastal Peoples. Handbook No. 34, Royal British Columbia Museum, Victoria, British Columbia (no *Carex*) BLW
- Turner, N. J. 1978 Food Plants of British Columbia Indians. Part 2: Interior Peoples. British Columbia Provincial Museum Handbook No. 36. Victoria (no *Carex*) BLW
- Turner, N. J. 1991 Burning mountain sides for better crops: Aboriginal landscape burning in British Columbia. In K. P. Cannon (ed.), Archaeology in Montana. Sepcial Issue 32: 57-74
- Turner, N. J. 1992 Just when the wild roses bloom': The legacy of a Lillooet basket weaver. TEK TALK: A Newsletter of Traditional Ecological Knowledge 1: 2-5
- Turner, N. J. 1998 Plant Technology of First Peoples in British Columbia. Royal British Columbia Museum Handbook, Victoria, British Columbia 256 pp. yes *Carex obnupta*, *Carex lyngbyei* BLW
- Turner, N. J. 1979 Plants in British Columbia Indian Technology British Columbia Provincial Museum Handbook No. 38. Victoria yes
- Turner, N. J. and B. S. Efrat 1982 Ethnobotany of the Hesquiat Indians of Vancouver Island. Victoria. British Columbia Provincial Museum (p. 18, 50, 53) yes *Carex* sp. BLW
- Turner, N. J., and M. Ignace 1990-1994 Secwepemc Ethnobotany Fieldnotes and Manuscripts. Secwepemc Cultural Education Society, Kamloops, B.C.
- Turner, N. J., J. Thomas, B. F. Carlson, and R. T. Ogilvie 1983 Ethnobotany of the Nitinaht Indians of Vancouver Island. Victoria. British Columbia Provincial Museum (p. 79) yes *Carex obnupta* BLW
- Turner, N. J., L. C. Thompson, M. T. Thompson, and A. Z. York. 1990 Thompson Ethnobotany. Knowledge and Usage of Plants by the Thompson Indians of British Columbia Royal British Columbia Museum, Memoir No. 3, Victoria, British Columbia yes *Carex atherodes*, *Carex obnupta*, *Carex rostrata*, *Carex* sp. BLW
- Turner, N. J., R. Bouchard, and D. Kennedy 1980 Ethnobotany of the Okanagan-Colville Indians of British Columbia and Washington. Occasional Papers of the British Columbia Provincial Museum, No. 21. Victoria. yes *Carex concinnoides* BLW
- Turner, N. J. 2004 Plants of Haida Gwaii Sononis Press, Winlaw, British Columbia 264 pp no BLW
- Vestal, P. A. 1952 The ethnobotany of the Ramah Navaho Papers of the Peabody Museum of American Archaeology and Ethnology 40: 1-94 (p. 19) yes *Carex inops* ssp. *heliophila*, *Carex microptera* BLW