

Table S3.1

Supplemental Materials for:

Chapter 3: Ethnobiology: Nonfishing Subsistence and Production. D. Ann Trieu Gahr *Chinookan Peoples of the Lower Columbia River* (R.T. Boyd, K.M. Ames, T. Johnson editors). University of Washington Press, Seattle 2013

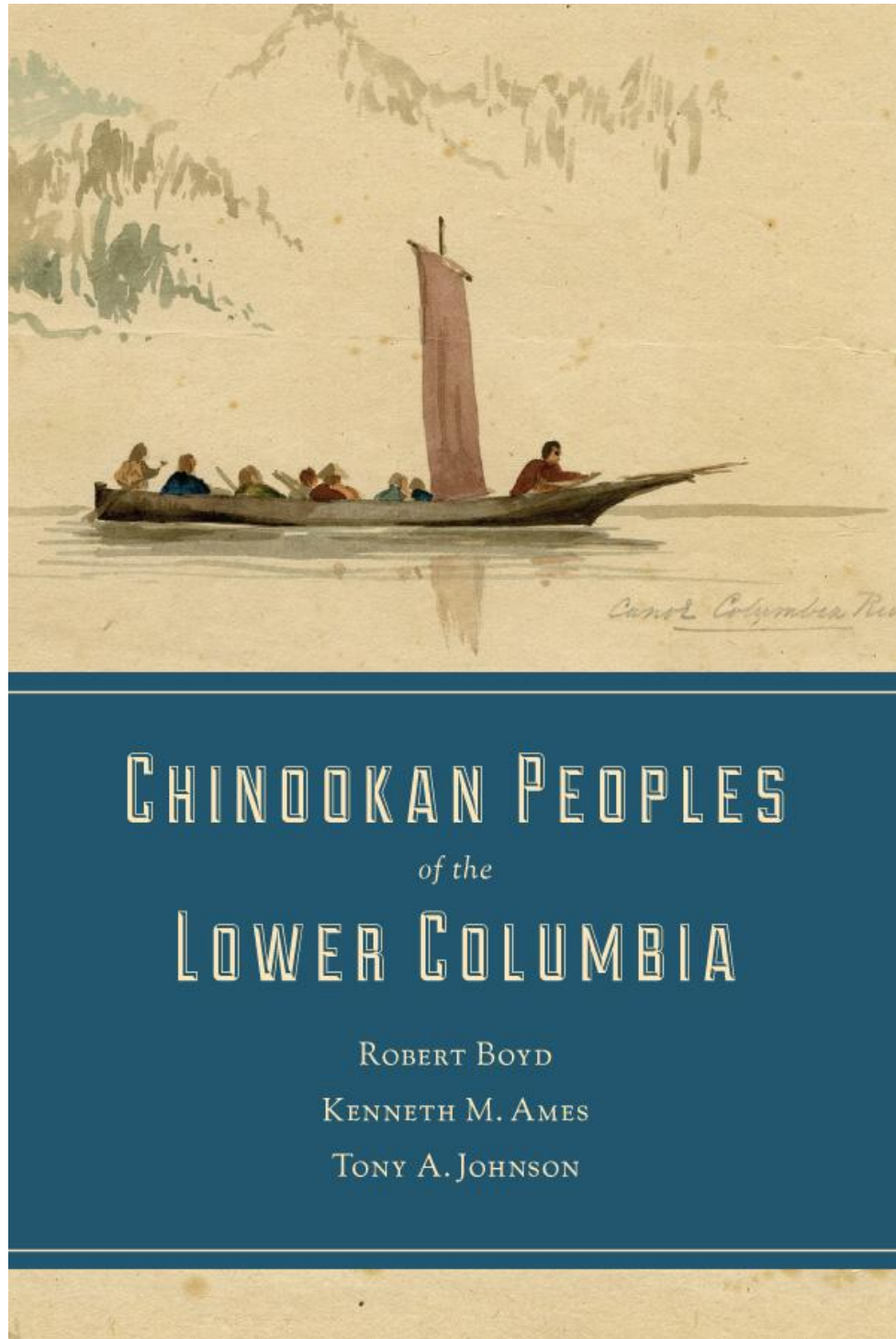


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TABLE S3.1. Major Food Resources (excepting the fin fishes (see Chapter 4)).

Shellfish

barnacles (*Balanus* spp.)
butter clam, Washington butter clam (*Saxidomus gigantea*)
crab (*Cancer* spp.), e.g., dungeness crab (*C. magister*)
crawfish (*Pacifastacus leniusculus*)
cockles, e.g., Nuttall's or heart cockle (*Clinocardium nuttallii*)
dogwinkle (*Nucella* spp.)
gaper or horse clams, e.g., pacific gaper clam (*Tresus nuttallii*), fat gaper (*T. capax*)
geoduck (*Panopea abrupta*)
hardshell or macoma clams, e.g., bent-nosed clam (*Macoma nasuta*), heavy macoma (*M. brota*)
mussels, e.g., blue mussel (*Mytilus edulis*), California mussel (*M. californianus*)
native littleneck clam (*Protothaca staminea*)
Olympia oyster (*Ostrea lurida*)
razor clam (*Siliqua patula*)

Notes on use: Crabs boiled in large quantities; dungeness claw meat roasted; clams boiled, fried, steamed, smoke dried; crawfish also used medicinally.

Seasonality: Many available year round.

Nutrition: Omega-3 fatty acids, protein, thiamine, riboflavin, vitamin B6, folate, vitamin B12, iron, magnesium, phosphorus, zinc, copper, selenium.

Birds

albatrosses, e.g., blackfooted albatross (*Phoebastria nigripes*), Laysan albatross (*P. immutabilis*), short-tailed albatross (*P. albatrus*)
cormorants, e.g., Brandt's cormorant (*Phalacrocorax penicillatus*), double-crested cormorant (*P. auritus*), pelagic cormorant (*P. pelagicus*)
ducks, dabbling (Anatinae), e.g., mallard (*Anas platyrhynchos*), pintail (*A. acuta*), blue-winged teal (*A. discors*), green-winged teal (*A. crecca*), northern shoveler (*A. clypeata*)
ducks, diving (Aythyinae), e.g., bufflehead (*Bucephala albeola*), canvasback (*Aythya valisineria*), goldeneye (*Bucephala clangula*), greater scaup (*A. marila*), lesser scaup (*A. affinis*), ring-neck (*A. collaris*)
ducks, stiff-tailed (Osyurinae), e.g., ruddy duck (*Oxyura jamaicensis*)
ducks, fish or mergansers, e.g., common merganser (*Mergus merganser*), hooded merganser (*Lophodytes cucullatus*), red breasted merganser (*M. serrator*)
geese, e.g., snow goose (*Anser caerulescens*), white-fronted goose (*A. albifrons*), Canada goose (*Branta canadensis*)
grebes, e.g., western grebe (*Aechmophorus occidentalis*), horned grebe (*Podiceps auritus*)
grouse, e.g., blue grouse (*Dendragapus obscurus*), ruffed grouse (*Bonasa umbellus*)
gulls, e.g., glaucous gull (*Larus hyperboreus*), western gull (*L. occidentalis*)

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loons, e.g., common loon (*Gavia immer*), Pacific loon (*G. pacifica*), red-throated loon (*G. stellata*)
murre, e.g., common murre (*Uria aalge*), marbled murrelet (*Brachyramphus marmoratus*)
owls, e.g., great horned owl (*Bubo virginianus*)
pelicans, e.g., brown pelican (*Pelecanus occidentalis*)
pigeon, e.g., band-tailed (*Columba fasciata*)
quail, e.g., California quail (*Callipepla californica*)
scoters, e.g., surf scoter (*Melanitta perspicillata*), white-winged scoter (*M. fusca deglandi*)
shearwaters, e.g., sooty shearwater (*Puffinus griseus*)
snipes, e.g., Wilson's snipe (*Gallinago delicata*),
swans, e.g., trumpeter swan (*Cygnus buccinator*), tundra swan (*C. columbianus*)

Notes on use: Meat roasted, steamed whole, boiled for broth; eggs.

Seasonality: Meat, year around; eggs, spring and summer.

Nutrition: Meat: protein, thiamine, niacin, vitamin B6, iron, phosphorus, zinc, copper, selenium.
Eggs (quail & duck): protein, riboflavin, folate, vitamin B12, panthothenic acid, iron, phosphorus, selenium.

Sea Mammals

bottlenose dolphin (*Tursiops truncatus*)
harbor seal (*Phoca vitulina*)*
northern fur seal (*Callorhinus ursinus*)
harbor porpoise (*Phocoena phocoena*)
sea otter (*Enhydra lutris*)
sea lions, California sea lion (*Zalophus californianus*), Stellar sea lion (*Eumetopias jubatus*)*
whales (Cetacea), e.g., California gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), killer whale (*Orcinus orca*), minke whale (*Balaenoptera acutorostrata*), sei whale (*Balaenoptera borealis*), sperm whale (*Physeter macrocephalus*)*¹

Notes on use: Meat dried, boiled for oil. Seals and sea lions prepared by singeing hair off over fire, then roasting meat; also dried.

Seasonality: Sea lions late winter (February).

¹ Whales are rarely described by species in the historic or oral literature. Lewis and Clark's beached whale at Clatsop has been identified as a blue whale (*Balaenoptera musculus* http://oceanexplorer.noaa.gov/explorations/lewis_clark01/background/hydroacoustics/hydroacoustics.html) Blue whale strandings are relatively rare. Archaeologically, some whale bone has been identified by species (Colton 2002; Losey and Yang 2007), but most often whale bones are classified according to size. Other species listed here are based on whale strandings reports from 1930 through 2002 on the northern Oregon and southern Washington coasts (Norman et al. 2004). Ray (1938) mentioned fin and sei whale as probably being important. However, fin and sei stocks were severely depleted by the 1900's and therefore would have been underrepresented in the strandings study.

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Nutrition: Meat: protein, vitamin A, riboflavin, niacin, vitamin B12, iron, phosphorus, zinc, selenium. Whale oil: vitamins A, D, E.

Terrestrial/Riverine mammals

bear (*Ursus americanus*)*
beaver (*Castor canadensis*)*
bobcat (*Lynx rufus*)
deer, e.g. Columbia white-tail (*Odocoileus virginianus*)*, black-tail (*O. hemionus columbianus*)
elk, wapiti (*Cervus elaphus*)*
ground squirrel (*Spermophilus beecheyi*)*
mink (*Neovison vison*)
mountain beaver (*Aplodontia rufa*)
mountain goat (*Oreamnos americanus*)
mountain sheep (*Ovis canadensis*)
cougar, mountain lion, puma (*Puma concolor*)
rabbit (Leporidae), e.g., brush rabbit (*Sylvilagus bachmani*), snowshoe hare (*Lepus americanus*)*
raccoon (*Procyon lotor*)
tree squirrels, e.g., Douglas squirrel (*Tamiasciurus douglasii*), northern flying squirrel (*Glaucomys sabrinus*), western gray squirrel (*Sciurus griseus*)*

Notes on use: Meat roasted, boiled, smoked and dried, baked, pulverized and made into gravy, grease, marrow, or rendered for oil.

Nutrition: Meat: protein, thiamine, riboflavin, niacin, vitamin B6, B12, iron, phosphorous, zinc, selenium.

PLANTS

Fruits

black hawthorn (*Crataegus douglasii*)
blueberries/cranberries/huckleberries (*Vaccinium* spp.), e.g., bog blueberry (*V. uliginosum*), Cascade bilberry (*V. deliciosum*), cranberry (*V. oxycoccos*), evergreen huckleberry (*V. ovatum*), red huckleberry (*V. parvifolium*), thinleaf huckleberry (*V. membranaceum*)*
choke cherry (*Prunus virginiana*)*
currants/gooseberries (*Ribes* spp.), e.g., coastal black gooseberry (*R. divaricatum*), blood currant (*R. sanguineum*), prickly currant (*R. lacustre*), stink currant (*R. bracteosum*), *
elderberry (*Sambucus* spp.), e.g., blue elderberry (*S. cerulea* var. *cerulea*), red elderberry (*S. racemosa* var. *racemosa*)
Indian plum (*Oemleria cerasiformis*)*
kinnikinnik, common bearberry (*Arctostaphylos uva-ursi*)

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Oregon crabapple (*Malus fusca*)*

raspberries, e.g., wild raspberry, black raspberry, blackcap (*R. leucodermis*); thimbleberry (*R. parviflorus*); trailing blackberry, dewberry (*R. ursinus*); salmonberry (*R. spectabilis*)*

salal (*Gaultheria shallon*)

serviceberries, saskatoon (*Amelanchier alnifolia*)

strawberries, e.g., beach strawberry (*Fragaria chiloensis*), woodland strawberry (*F. vesca*)*

western Solomon's seal (*Maianthemum racemosum* ssp. *amplexicaule*)

Notes on use: Eaten fresh, dried, boiled, mixed with fish oil or dried fruits mixed with pounded salmon. Blueberries/huckleberries made into large loaves (up to 15 lbs) for storage; loaves crumbed and mixed with cold water until thick. Salal made into loaves of 5 or 7 lbs, covered with leaves and stored during the winter with a shelf life of a year. Kinnikinnik bruised and eaten with oil. Crabapples softened by storing in baskets. Hawthorn steamed. Elderberry mixed with other fruits.

Seasonality: Mid-April to mid-October.

Nutrition: Dietary fiber, vitamins A, C, E (alpha tocopherol), K, riboflavin, potassium, manganese.

Nuts/Seeds

acorns (*Quercus garryana*)*

filberts, hazelnuts (*Corylus cornuta*)*

tarweed, e.g., coast tarweed (*Madia sativa*)

Notes on use: Acorns, baked in an earth oven, stored in a mud cache for winter; aromatic seeds mixed with mud to pack acorns in pit caches; eaten with dried or pounded salmon.

Hazelnuts, fresh or stored. Tarweed seeds roasted, pounded into fine flour for bread.

Seasonality: Late summer and fall.

Nutrition: Dietary fiber, omega-6 fatty acids, protein, vitamins C, E, K, thiamin, vitamin B6, folate, calcium, iron, magnesium, phosphorus, potassium, zinc, copper, manganese.

Greens

balsam root (*Balsamorhiza sagittata*)

blueberries/huckleberries (*Vaccinium* spp.)

bracken fern (*Pteridium aquilinum*)

cattail (*Typha latifolia*)

cow parsnip (*Heracleum maximum*)

equisetum, horsetails (*Equisetum arvense*, *E. telmateia*) male stems

fireweed (*Chamerion angustifolium*)*

raspberries, eg. wild raspberry, black raspberry, blackcap (*Rubus leucodermis*); thimbleberry (*R. parviflorus*); trailing blackberry, dewberry (*R. ursinus*); salmonberry (*R. spectabilis*)*

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stinging nettle (*Urtica dioica*)
sour dock (*Rumex aquaticus* var. *fenestratus*)*
wild celery or sea watch (*Angelica lucida*)

Notes on use: Usually springtime young leaves used for greens. Leaves and shoots eaten raw or boiled, sometimes with oil, blueberry/huckleberry leaves infused for tea.

Nutrition: Fiber, vitamins A, C, riboflavin, calcium, magnesium, potassium, manganese.

Roots (rhizomes, bulbs, corms, roots, tubers)

balsam root (*Balsamorhiza sagittata*)*
beach pea (*Lathyrus japonicus*)
bitter root (*Lewisia rediviva*)*
black lichen (*Bryoria fremontii*)*
bracken fern (*Pteridium aquilinum*)
camas (*Camassia leichtlinii*, *C. quamash*)*
cat ear lily, Tolmie star tulip (*Calochortus tolmiei*)
cattail, cooper's flag (*Typha angustifolia*, *T. latifolia*)
cous, bisquit root, bitter wild potato (*Lomatium cous*, *Lomatium canbyi*)*
edible thistle (*Cirsium edule*)
equisetum, horsetails (*Equisetum arvense*, *E. telmateia*)
fawn lily, ga'gu bottoms, first camas (*Erythronium* spp.), e.g., dogtooth lily, yellow avalanche lily (*E. grandiflorum*), white avalanche lily (*E. montanum*), giant white fawn lily (*E. oregonum*), mahogany fawn lily (*E. revolutum*),
rice root lily (*Fritillaria* spp., e.g., northern rice root (*F. camschatcensis*), checker lily (*F. affinis*))*
potentilla, silverweed (*Argentina egedii*)*
sand verbena, e.g., coastal sand verbena (*Abronia latifolia*), pink sand verbena (*A. umbellata*)
shore lupine (*Lupinus littoralis*)*
skunk cabbage (*Lysichitum americanum*)
spiny wood fern, shield fern (*Dryopteris expansa*)
wapato* (*Sagittaria latifolia*; *S. cuneata*)*
water parsnip (*Sium suave*)
wild hyacinth, e.g., harvest brodiaea (*Brodiaea elegans*), crown brodiaea (*B. coronaria*), white brodiaea (*Triteleia hyacinthina*)
wild onion, e.g., nodding onion (*Allium cernuum*), Olympic onion (*A. crenulatum*), taper tip onion (*A. acuminatum*)

Notes on use: Roots, raw, roasted in ashes, dried, boiled, roasted, or pounded into flour to make biscuits, cakes, or gruel. Roots high in inulin content, e.g., balsam root, edible thistle, camas, fawn lily and wild onion steamed in earth ovens. Often made into large cakes (7-15 lbs.) and

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stored or traded. Black lichen thallus prepared with other root foods in earth oven and made into cakes.

Seasonality: Spring through fall. Some available year-round.

Nutrition: Protein, carbohydrates, thiamine, riboflavin, niacin, calcium, iron, magnesium, phosphorus, potassium.

Sources: (Boas 1894, 1901; Boyd 1996; Colton 2002; Croes, et al. 2009; Douglas 1959; Drucker [1933-1954]; Franchère 1967; Frederick 2009; Gill 1985; Gunther 1992; Jacobs 1958, 1959; Lewis & Clark 1983-2001; Losey & Power 2005; Losey, et al. 2003; Losey & Yang 2007; Lyman 1994, 2003; Ray 1938, 1942; Ross 2000; Sapir 1909; Spier & Sapir 1930; Thompson 2007; Tolmie 1963; Townsend 1999; Wilson, et al. 2008; Zehr 2002)

Nutrition: (Keely, et al. 1982; Kuhnlein 1989, 1990; Kuhnlein & Turner 1991; Nutrition Data 2008; U.S. Department of Agriculture 2005)

Note: *indicates taxa used to create composite nutritional highlights for this group

Table S3.2

TABLE S3.2. Plant and Animal Resources used in Technology

Shellfish

abalone, e.g., green abalone (*Haliotis fulgens*), pinto abalone (*H. kamtschatkana*), red abalone (*H. rufescens*)
clams, e.g., pacific gaper clam (*Tresus nuttallii*), hardshell clams (*Macoma* spp.), little neck clams (*Protothaca staminea*), etc.
cockles, e.g., heart cockle (*Clinocardium nuttallii*)
dentalium (*Antalis pretiosum*)
giant rock scallop (*Crassadoma gigantea*)
mussels, e.g. blue mussel (*Mytilus edulis*), California mussel (*M. californianus*)
purple olive snail (*Olivella biplicata*)
red turban (*Lithopoma gibberosa*)

Use notes. Shell beads and currency, dentalia imported. Clam and mussel shells used for spoons, to hold small fire, scraping, catch oil from fish roasting, music rattles; snail opercula used to decorate wood carvings.

Birds

ducks, dabbling (Anatinae), e.g., mallard (*Anas platyrhynchos*), pintail (*A. acuta*), blue-winged teal (*A. discors*), green-winged teal (*A. crecca*), northern shoveler (*A. clypeata*)
ducks, diving (Aythyinae), e.g., bufflehead (*Bucephala albeola*), canvasback (*Aythya valisineria*), goldeneye (*B. clangula*), greater scaup (*A. marila*), lesser scaup (*A. affinis*), ring-neck (*A. collaris*)
ducks, stiff tail (Osyurinae), e.g., ruddy duck (*Oxyura jamaicensis*)
eagles, e.g., bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*)
heron, e.g., great blue heron (*Ardea herodias*)
geese, e.g., Canada goose (*Branta canadensis*)
hawks, e.g., red-tailed hawk (*Buteo jamaicensis*); northern harrier (*Circus cyaneus*); goshawk (*Accipiter gentilis*), cooper's hawk (*A. cooperii*), sharp-shinned hawk (*A. striatus*), sparrow hawk (*Falco sparverius*)
loon, e.g., common loon (*Gavia immer*), Pacific loon (*G. pacifica*)
quail, e.g., California quail (*Callipepla californica*)
sandhill crane (*Grus canadensis*)
woodpecker, e.g., pileated woodpecker (*Dryocopus pileatus*), hairy woodpecker (*Picoides villosus*), downy woodpecker (*P. pubescens*), yellow shafted northern flicker (*Colaptes auratus*), red-breasted sapsucker (*Sphyrapicus ruber*)

Table S3.2

Use notes. Bone: arrowheads; decorated gaming pieces; needles from crane or heron second wing joint. Feathers: bright-colored used as fish lures; arrow shaft guides. Skins: woven into blankets, robes.

Mammals

bear, e.g., Black (*Ursus americanus*), Grizzly (*U. horribilis*)
beaver (*Castor canadensis*)
bobcat (*Lynx rufus*)
buffalo (*Bison bison*)
cougar (*Puma concolor*)
coyote (*Canis latrans*)
deer, e.g., Columbia white tail deer (*Odocoileus virginianus leucurus*), Columbia black tail deer (*O. hemionus columbianus*)
elk, wapiti (*Cervus elaphus*)
fox, e.g., Cascade red fox (*Vulpes vulpes cascadenis*), common gray fox (*Urocyon cinereoargenteus*)
harbor seal (*Phoca vitulina*)
lynx (*Lynx canadensis*)
mountain beaver (*Aplodontia rufa*)
mountain goat (*Oreamnos americanus*)
mountain sheep (*Ovis canadensis*)
muskrat (*Ondatra zibethicus*)
porcupine (*Erethizon dorsatum*)
rabbit, hare (Leporidae), e.g., brush rabbit (*Sylvilagus bachmani*), snowshoe hare (*Lepus americanus*)
raccoon (*Procyon lotor*)
river otter (*Lontra canadensis*)
sea otter (*Enhydra lutris*)
tree squirrel, e.g., Douglas squirrel (*Tamiasciurus douglasii*), northern flying squirrel (*Glaucomys sabrinus*), western gray squirrel (*Sciurus griseus*)
whale, e.g., California gray whale *Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), killer whale (*Orcinus orca*), minke whale (*Balaenoptera acutorostrata*) sei whale (*B. borealis*), sperm whale (*Physeter macrocephalus*)
wolf (*Canis lupis*)

Use notes:

Antler/horn and bone

Carved sculpture: elk antler, whale bone, unspecified mammal bone

Dishes, bowls, spoons: mountain sheep and mountain goat horn

Table S3.2

Fishing/hunting gear: toggleheads of elk antler; herring rake tines of unspecified mammal bone; projectile points (spears, arrows, harpoon darts) of deer antler, unspecified mammal bone; clubs of whale bone

Game pieces (colored or marked): beaver teeth, unspecified mammal bone, deer metacarpals

Miscellaneous tools: handles for adzes, digging sticks and knives of deer and elk antler, unspecified mammal bone; awls of bear, raccoon or deer bone; rib bone scrapers of bear, deer, or elk; flaking tool of deer antler; net shuttle of unspecified mammal bone

Woodworking tools: incising and fine carving tools of beaver teeth; chisels of unspecified mammal bone; wedges of elk antler

Skins, bladders, and sinew

Blankets, robes, and garments: skins of bear, beaver, buffalo (bought/traded from Plateau groups), common gray fox, coyote, deer, elk, fox, gray squirrel, lynx or bobcat, mountain beaver, mountain goat, mountain sheep, muskrat, panther, raccoon, wolf; skins of bear, beaver, deer, rabbit/hare, and sea otter woven into strips; mountain sheep wool woven into blankets

Clothing decoration: bear claws, elk teeth and porcupine quills (bought/traded from Klamath)

Hair decoration: thin strips of sea and river otter skins woven into hair

Headgear: hat from coyote head; elk head hunting decoy

Footwear: moccasins of deer skin or buffalo with fur on (traded in); snowshoes of bear rawhide

Armor and shields: elk hides

Quivers: wolf skin, young bear skins

House doors: elk hides

Containers: deer and seal bladders

Parfleches (traded from Nez Perce): deer skin

Strings and cords: buckskin, deer and elk sinew

Tanning: deer brains

Tallow: deer

Plants

ash (*Fraxinus latifolia*)

bear grass, pine lily, white mountain grass (*Xerophyllum tenax*)

big leaf maple (*Acer macrophyllum*)

bitter cherry (*Prunus emarginata*)

blackberries, e.g., wild raspberry, black raspberry, blackcap (*Rubus leucodermis*), trailing blackberry, dewberry (*R. ursinus*), salmonberry (*R. spectabilis*)

cat tails, flags (*Typha latifolia*)

cottonwood (*Populus balsamifera* ssp. *trichocarpa*)

cow parsnip (*Heracleum maximum*)

dogwood (*Cornus nuttallii*)

Douglas-fir (*Pseudotsuga menziesii*)

Table S3.2

elderberry (*Sambucus* spp.), e.g., blue elderberry (*S. cerulea* var. *cerulea*), red elderberry (*S. racemosa* var. *racemosa*)
fern, e.g., bracken fern (*Pteridium aquilinum*)
fir, e.g., grand fir, balsam fir (*Abies grandis*)
hazel (*Corylus cornuta*)
horsetail, scouring rush, e.g., field scouring rush (*Equisetum arvense*), horsetail (*E. hyemale*)
huckleberry (*Vaccinium* spp.)
Indian hemp; silk grass (*Apocynum cannabinum*)
moss (Bryophytes)
nettle (*Urtica dioica*)
ninebark or sevenbark (*Physocarpus capitatus*)
oceanspray, ironwood (*Holodiscus discolor*)
Oregon white oak, Garry oak (*Quercus garryana*)
Oregon grape, mahonia (*Mahonia nervosa*)
pine (Pinaceae), e.g., ponderosa pine (*Pinus ponderosa*)
red alder (*Alnus rubra*)
rushes (*Juncus* spp.)
salmonberry (*Rubus spectabilis*)
sea grass, e.g., seawrack (*Zostera marina*), Scouler's sea grass (*Phyllospadix scouleri*)
seaweed, e.g., *Fucus* sp., *Porphyra* sp.
sedges (*Carex* spp.)
serviceberry, saskatoon (*Amelanchier alnifolia*)
skunk cabbage (*Lysichitum americanum*)
spruce (*Picea sitchensis*)
tule, bulrush (*Schoenoplectus acutus*)
vine maple (*Acer circinatum*)
western hemlock (*Tsuga heterophylla*)
western red cedar (*Thuja plicata*)
wild celery (*Lomatium* spp.)
wild crabapple, Oregon crabapple (*Malus fusca*)
willow (*Salix* spp.)
yew (*Taxus brevifolia*)

Awls and needles: dogwood, ocean spray, Oregon white oak, wild crabapple, yew

Boxes and buckets: bark of big leaf maple or western red cedar

Baskets, bags, mats: bear grass, big leaf maple inner bark, cat tail stems, rush stems, spruce roots, tule stems, western red cedar inner bark and roots

Canoes and cradles: western red cedar

Table S3.2

Cordage/ties/thread/fishing lines: bitter cherry bark, hazel withes, Indian hemp stem fibers, nettle stem fibers, rush stems, sea grass, spruce root, spruce withes, tule, and western red cedar roots

Digging sticks: wood of ninebark, Oregon white oak, serviceberry, and yew

Dyeing: alder bark, blackberries, nettle root mixed with unidentified dye from the north, Oregon grape root, and western hemlock

Fire technology: fire drill of cottonwood root; fire tinder of cow parsnip stems, pine “pitchwood”, finely shredded western red cedar; torches from pitchwood splints bound in maple or willow bark; fuel wood of alder for roasting, ash, bitter cherry, Douglas-fir (wood and bark), hazel for smoke drying, Oregon white oak, serviceberry, and vine maple

Fishing implements: dip net handle of fir, fishing spear socket of salmonberry; dip net hoop of vine maple; net buoys of western red cedar; nets of Indian hemp stem fibers, nettle stem fibers, and spruce root; fishing lures of wild celery juice applied to nets and hooks to attract fish

Game toys: maple burl wood ball for shinny; acorn buzzer tops; vine maple wood for bladed clubs for shinny

Garments: women skirts of rush, Indian hemp fibers, nettle stem fibers, and western red cedar inner bark; rain cloaks of tule; hats/helmets of bear grass, western red cedar

Snowshoe hoops: dogwood, hazel, and Oregon white oak

Sources: (Boas 1894, 1901; Boyd 1996; Colton 2002; Croes, et al. 2009; Douglas 1959; Drucker [1933-1954]; Franchère 1967; Frederick 2009; Gunther 1992; Jacobs 1958, 1959; Lewis & Clark 1983-2001; Losey & Power 2005; Losey & Yang 2007; Lyman 1994, 2003; Lyman & Zehr 2003; Ray 1938, 1942; Ross 2000; Sapir 1909; Spier & Sapir 1930; Tolmie 1963; Townsend 1999; Wilson, et al. 2009; Zehr 2002)