



COAST SALISH RELATIONAL ECOLOGIES & FOOD SYSTEMS

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Linguistic diversity on the Northwest Coast





Pacific Northwest ethnoecological systems — a “Paradox of Plenty”

“The coast’s native societies and economies are the world’s best examples of complex hunter-gatherers, or affluent foragers”

(Ames & Maschner 1999:24)

Social complexity on the Northwest Coast

- Semi – to fully sedentary
- Production of large amounts of processed and stored foods (surplus)
- Villages based on extended family households of 30 to 100 + people.
- Diet breadth – focus on a few key resources while simultaneously utilizing many more
- Complex and specialized technologies
- Relatively high population densities (~200,000 pre-contact)
- Social hierarchy

Pacific Northwest ethnoecosystems – a “Paradox of Plenty”

“Every kind of food used by these
tribes was a spontaneous product of
nature...”

(Haeberlin and Gunther 1930).

A cultural model of intensification

Time

Foraging



Farming



Cultural models and human perception

“I could not possibly believe any uncultivated country had ever been discovered exhibiting so rich a picture. Stately forests... pleasingly clothed its eminences and chequered its vallies; presenting in many places, extensive spaces that wore the appearance of having been cleared by art... **[We] had no reason to imagine this country had ever been indebted for its decoration to the hand of man**”

(Captain George Vancouver)

Rethinking the cultural model

Time

Foraging?



Farming?



What is actually happening here?

Rethinking the paradox of plenty

“The term ‘hunter-gatherer’ is a misnomer because Northwest Coast Societies were primarily fishers [and food producers]”

(Moss 2012:27).

“[I]n my view, the hunter-gatherer moniker has outlived its utility on the Northwest Coast. The genius of Northwest Coast cultural achievements is not duplicated anywhere else and these accomplishments have grown out of a deep attachment to and knowledge of the sea, landscapes, plants and animals of the region”

(Moss 2012:33)

Ethnoecological systems

- A biocultural, relational approach:
 - ▣ The sociocultural, political, economic and biological aspects of *all* people-nature relations (cf. Fuentes 2010).

The centrality of the $sg^{wi}ig^{wi}$?

- Inter-village gatherings that marked the occasion of important life events
- Hosted by $si?ab$, or “high class” people
- The “give-away”



Sg^wig^wi?, food systems and relational ecologies

- Food systems = *the social, cultural, ecological, political and economic systems that shape the ways in which food is produced, processed, distributed, and consumed*
- *sg^wig^wi?* can be understood as a “quintessential” expression of the Puget Salish food system

		Predictability	
		High	Low
Spatial scale	Village	Annual fluctuations in the availability of key resources (Colwell, Goland)	Localized stochastic events (loss of winter food supply, loss of a provider) (Cashdan)
	"Watershed"	Spatial variability in the availability of key resources (Goland, Kelly)	
	Region		Climate changes, long-term climate forcing, interdecadal cycles, 'bad winters'; Regional scale disasters (vulcanism, earthquakes) (Cashdan, Fitzhugh et al)

Table 1: Vulnerabilities in the Puget Salish Food System: spatial scale & degree of predictability (risk, reciprocity and social networks theorists in bold)

Resource Cultivation and *Xəčusadad*

- "Cultivation applies to enhancement of all interactions between the human and non-human realm. It applies to the totality of cultural interaction, both within a community and without" (Blukis-Onat)



Resource Cultivation and $g^w\text{ə}d^z\acute{a}dad$

- Status as a high-class person, or $si\text{ʔ}\acute{a}b$, revolves around the possession of specialized knowledge, or $g^w\text{ə}d^z\acute{a}dad$ (“advice”) about one’s own heritage and how to maintain good relations with human and non-human others.
- The late Upper Skagit elder Vi Hilbert proposed that someone who is $si\text{ʔ}\acute{a}b$ maintains good relations through $tiXdx^w$ - taking care of others.

Puget Salish Relational Ecologies

“Don’t teach
all your
children the
same thing.
Otherwise
they won’t
need each
other, and
the world
will split
apart.”

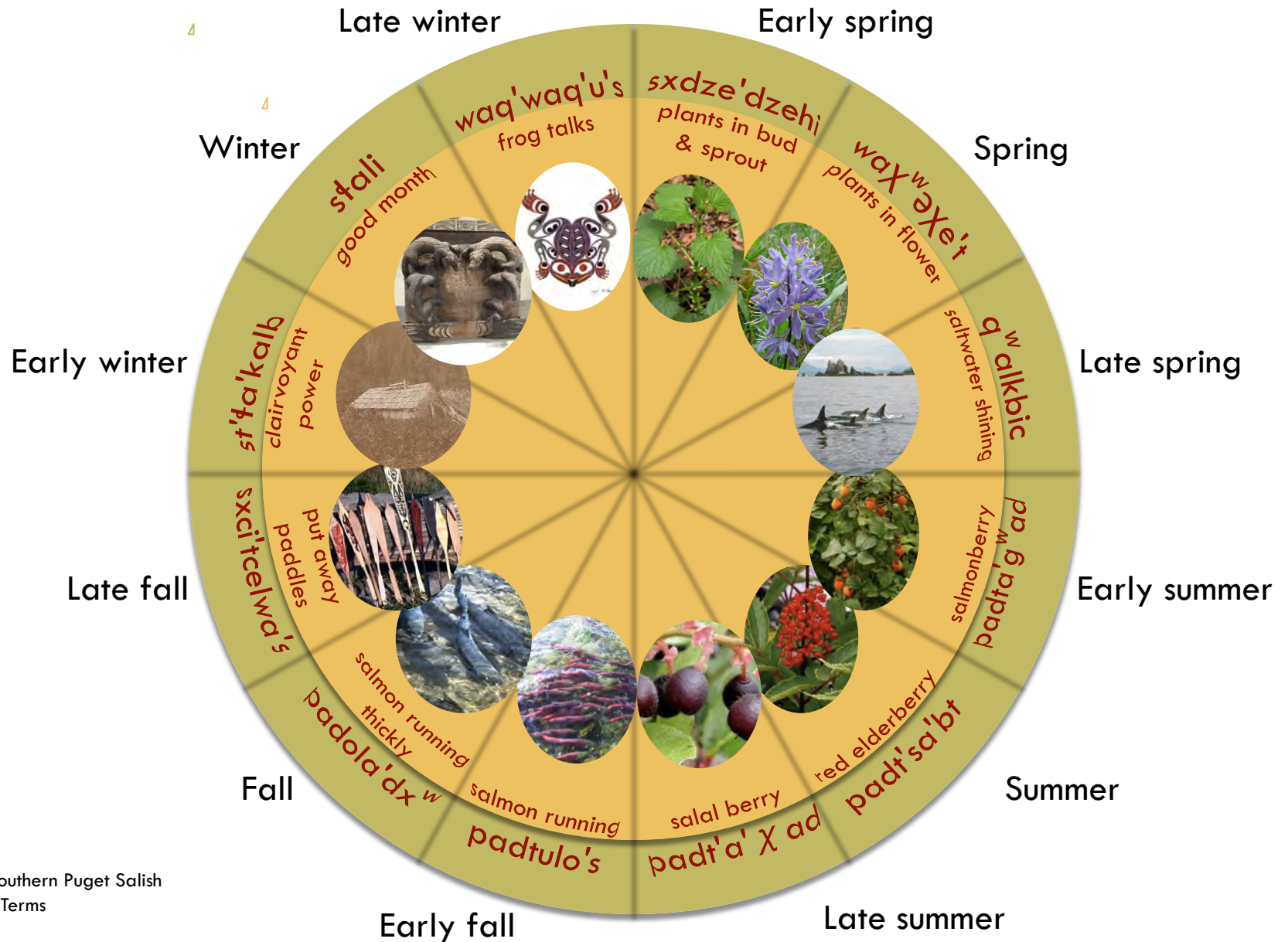
Bruce Subiyay
Miller



Socio-ecological complexity



Southern Lushootseed Seasonal Round



Predictable, spatially variable foods

- Example: Iron and spatial variation
- Iron may have been in chronically short supply in Puget Salish territory.
- This shortage was ameliorated through cultivation of plants with high iron content, preparation of teas, and through exchange of these plants.
- Bitterroot
- Wapato
- Teas (labrador & yarrow)



Predictable, seasonally variable foods

- Example: Vitamin C and temporal variation
- Shoots and berries widely distributed but have a limited season of harvest
- Our bodies need Vitamin C year-round
 - Early spring greens: goosefoot, nettle, wild violets
 - Cornucopia of berries for fresh eating (red elderberry)
 - late season for storage (salal, mountain huckleberry)



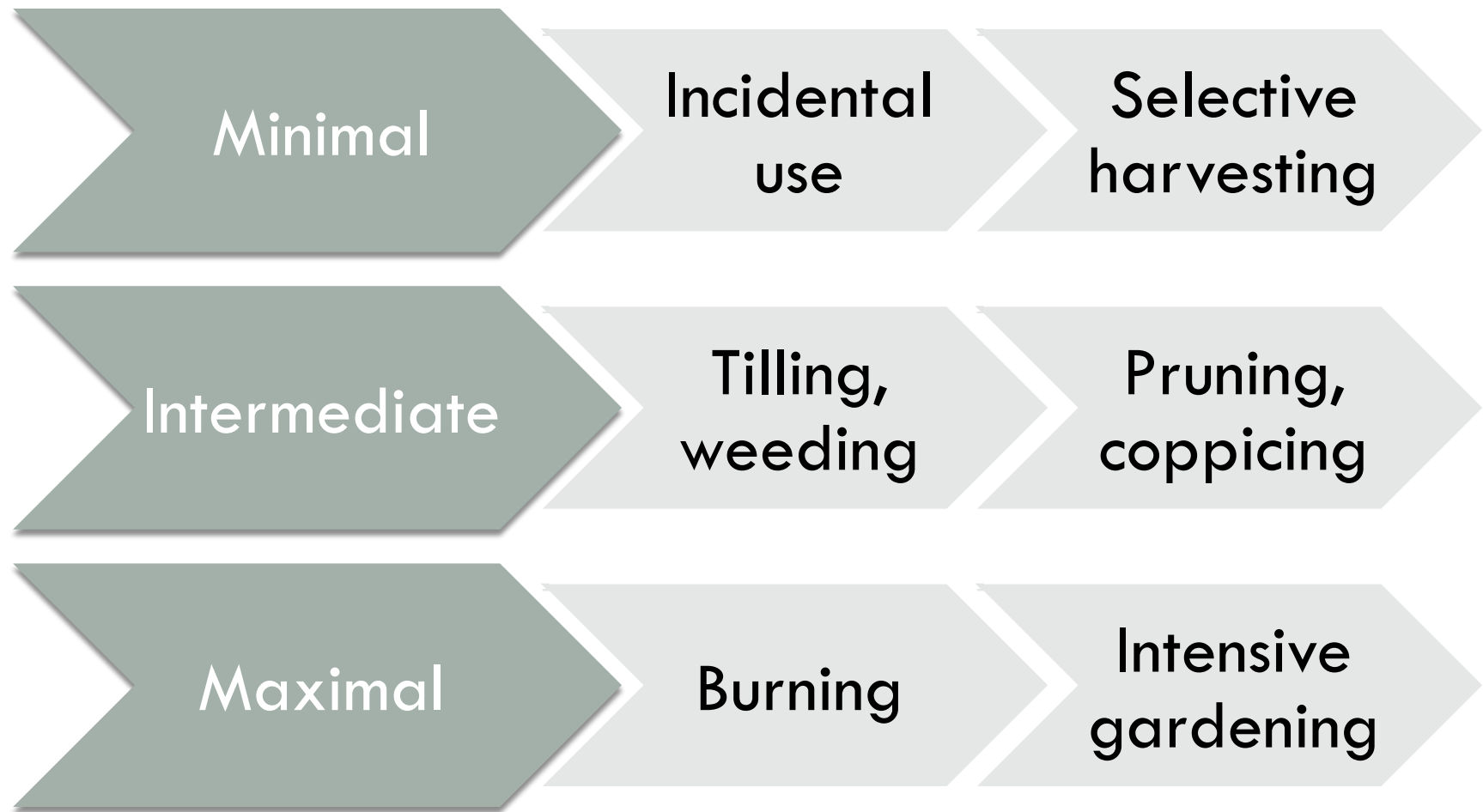
- Coast Salish cultivation of relationships between human and non-human others is encoded in the concepts of *Xəčusadad* and *g^wəd^zádad*
- Generosity is a measure of wealth, which in turn is a measure of living up to *Xəčusadad*
- Variability in resources across the landscape and far-flung kinship and exchange networks are related phenomena.

NW Coast biomass...

- *The route lay, for several days, through forests of spruce, and some of the trees that had fallen measured two hundred and sixty-five feet in length. One of these, at the height of ten feet from the roots, measured thirty-five feet in circumference, and at the end which had been broken off in its fall, it was found to be eighteen inches in diameter, which would make the tree little short of three hundred feet when it was growing... In many cases it was impossible to see over the fallen trees, even when on horseback, and on these, seedlings were growing luxuriantly, forcing their roots through the bark and over the body of the trunk till they reached the ground. (Wilkes 1916[1841]:18); First Recorded Trip Over Naches Pass).*



Continuum of plant cultivation practices – degrees of intervention



Ecological effects of cultivation practices

Use of Horticultural Methods

Selective harvesting, digging and replanting; tilling and weeding; sowing and transplanting; pruning & coppicing; burning

Guided by Management Activities

Scheduling of seasonal rounds; rotation of harvesting locales; controlled access; religion/moral sanctions

Regulates

The scale, frequency and intensity of anthropogenic disturbance

Scale of Application

Results in:

Species level

increased productivity of selected spp.

Community level

increased habitat diversity

Landscape level

increased heterogeneity

NET RESULT:

Increased productivity and availability of culturally significant plant resources in anthropogenic landscape.

Peacock 1998

Garry oak savannahs



Garry oak savannahs



Camas prairies

The only prairie which is burned with any regularity is at Lake Nisqually. This prairie is the U.S. Army artillery impact range. It is either purposely burned by the military authorities as a safety measure, or it is accidentally set on fire by shelling every year. One can see that this area is the only one upon which no apparent encroachment of the Douglas Fir on the prairies has taken place in the last 100 years (Lang 1961).

A Landscape that Depends On Fire

KEEPING THE PRAIRIE ALIVE When ice age glaciers receded, trees and other plants slowly returned to this landscape. South Puget Sound prairies began to form about 10,000 years ago as the climate grew warmer and drier. Drought-tolerant grasses, flowers and oak trees flourished wherever glaciers had deposited gravelly, well-drained soil. About 7,000 to 5,000 years ago, the climate became cooler and wetter, supporting evergreen trees. Indian tribes began burning the prairies to keep woody trees and shrubs from overtaking the prairie plants they used for food and medicine. Fires kept the prairies open for travel and created habitat for wild game animals.



Trees invading mounded prairies

Controlled use of fires helps to maintain the prairies.

Douglas fir *Pseudotsuga menziesii*

Oregon white oak *Quercus garryana*

Camas *Camassia quamash*

Today, active management, mowing and controlled fires keep surrounding forests from encroaching on prairies.

Adaptations to Fire

Douglas-fir trees shade out prairie plants. Thick bark on mature trees helps protect them from low grass fires, but young trees and dense forests often don't survive fire.

Oregon white oak trees are part of the prairie ecosystem and reproduce best by stump sprouts and root suckers. New stands are quickly re-established after fire.

Prairies are covered with flowers following fires. These plants have adapted to fire by:

- ▶ Blooming early
- ▶ Reproducing by underground buds (geophytes)
- ▶ Having seeds that germinate after fires
- ▶ Having deep roots (perennials and bulbs)



Camas *Camassia quamash*

Big Huckleberry Meadows



Big Huckleberry Meadows

“Certain men were responsible for watching and maintaining the condition of the berry picking areas. One or two men were chosen specifically for the task of staying behind to burn the fields. These men were chosen not only for their knowledge, because they not only had to burn the fields, they had to call on the rain and thunder to put the fire out.”



Big Huckleberry Meadows



Big Huckleberry Meadows



Big Huckleberry Meadows



Food for thought...

