



Michael A. Buck

December 2019 3Rd Annual Lamprey
Information Exchange

“Traditional Ecological Knowledge of *Asum* (Pacific Lamprey *Entosphenus tridentatus*) in Central/Eastern Washington and Oregon from Indigenous Peoples of the Confederated Tribes and Bands of the Yakama Nation” Michael Buck¹ Ralph Lampman²

¹Environmental Science & Studies Program, Heritage University, Toppenish, WA 98948 ²Yakama Nation Fisheries Resource Management Program, Pacific Lamprey Project, Toppenish, WA 98948

~First qualitative & quantitative (mixed-methods) scientific approach to understanding Traditional Ecological Knowledge (TEK) of the Yakama Nation in the context of traditional fishing methods.

~This project presentation lead to the approved Heritage University Institutional Review Board application process to continue conducting ethnographic interviews with Elders of the Yakama Nation in the context of traditional harvesting of Pacific lamprey.

“Identifying Indigenous Yakama (Native Ways Of Knowing - NWOK) through acknowledgements of (Traditional Ecological Knowledge - TEK) of pacific lamprey harvesting” Principal-Investigator (PI) Dr. Jessica Black -- Ph.D.

Geological Sciences. Correspondent Ralph Lampman - Yakama Nation Fisheries. Student-Investigator Michael Buck-undergraduate researcher.

~Tribal-Academic partnership complexities of being an Indigenous researcher in an Indigenous community. Immeasurable time commitments to ceremony and ritual gathering etiquette. Validating “Research is Ceremony” in the Academic community.

~ Dedication to Community-Based Participatory Research (CBPR) and Tribal-Participatory Research (TPR).

~Seeking a valid methodological approach to Interpreting Yakama (NWOK) based on available data derived from ethnographic interviews, empirical data and Indigenous theoretical grounding.

“The Logic of the Uninformed”

The “Trash Fish” Case Study: A Challenge to produce Columbia River Basin tribal-specific metrics of health utilizing Traditional Ecological Knowledge TEK of Pacific Lamprey (*Entosphenus tridentatus*) at Yakama Nation Fisheries.

“**Asúm**” is the terminology that refers to the Pacific lamprey (*Entosphenus tridentatus*) in Sahaptin and *Ichishkín Sínwit*, the first language of the Indigenous Yakama Nation and Columbia River people. The anadromous Pacific Lamprey that is native to Pacific Northwest river tributaries of the United States, has historically been managed by federal and state fisheries agencies as rough fish or “trash fish” despite an ancient ecological and cultural significance.

The loss of sustainable habitat due primarily to the introduction of dams and agriculture along the Columbia has reduced population and distribution of the Pacific Lamprey to a species threatening low. Environmental Health Science tells us that our complex interactions with the environment and our physical surroundings influence our genetics and health. The oral history of “Wana-pum” or River-people is now being referenced by science and academics today as Traditional Ecological Knowledge TEK. The transference of valuable Traditional Ecological Knowledge (TEK) by means of an oral tradition can never be as effective as it once was along the historical Columbia River. The acquisition, according to (Castellano, 2000) of TEK is seen to come from three sources Traditional Knowledge (TK – generation to generation), empirical knowledge (gained from observation), and revealed knowledge (acquired through spiritual origins and recognized as a gift)”. Although ambiguous, the Yakama Nation Fisheries Pacific Lamprey Project and Heritage University have steadily built a working Tribal-Academic partnership with a special regard to the deliberate integration of Indigenous Knowledge (IK) & Traditional Ecological Knowledge (TEK) of the Yakama Nation. In-effect co-productive freshwater fisheries conservation measures and environmental studies projects are documented.

A comprehensive integration of Yakama Nation TEK systems would facilitate a fourth approach and more effective transference of Indigenous Knowledge (IK) that promotes dialogue between Elders, tribal youth and familiar academics throughout larval pacific lamprey data collection and translocation of adult pacific lamprey above dams. A longitudinal mixed methods research study at Yakama Fisheries would seek to measure and produce Yakama tribal-specific environmental health metrics by facilitating the co-production and re-vitalized transference of Indigenous Knowledge (IK) specific to the species Pacific Lamprey.

Community-Based Participatory Research (CBPR) allows the researcher to develop a collaborative relationship between Indigenous Nations leadership, University IRB, the Elders & youth of the community and also facilitates a critical element of Indigenous research, which is self-reflection (***is your research meaningful to the community in which you identify?***).

Noteworthy relationship building in this case, also develops a kinship with the species Pacific Lamprey, which provides a background of knowledge significant to conversations with Elders of the community who essentially inherited this behavioral mannerism with all traditional dietary foods of the Yakama. ***Participatory Action Research (PAR)*** experiments introduces the human dimension of restoration to Columbia River tributaries in a context of Traditional Ecological Knowledge of Pacific Lamprey population ecology.

Respectful *Indigenous Exchange frameworks* are pragmatic, experiential and facilitate a co-production of applicable Pacific Lamprey traditional habitat restoration measures. A revamping of the transference of Traditional Ecological Knowledge to the current generation of youthful academics within the Yakama state takes place on video-record. *Semi-structured group interviews would be video-recorded* with consent and coded for specific themes relative to congruent Environmental Health Science expertise and Traditional Ecological Knowledge TEK of Pacific Lamprey “Asum” from the Yakama State. . *The in-depth ethnographic interview* facilitates “magnified moments” captured on camera where Elders get lost in translation and proceed to transcend time and space. *Participant Observation documentation* from recorded interview analyses cites and separates implicit versus explicit statements and noteworthy physical gesturing.

A Code book would be produced from the ground up producing only themes that are in direct connection and/or derived from evidence/data collected from participant observation and specific statements documented in transcription. *Indigenous methodologies and “Research is Ceremony”* – Experiencing the devotional ceremony to the sacred food-system of the Yakama.

In this context, Pacific Lamprey would serve as the indicator species of synergy between historically dysfunctional conservation efforts. Columbia Basin knowledge holders of Indigenous descent and credited scientific knowledge holders that derive from non-Indigenous academic cultural backgrounds can also provide a phenomenological perspective of Columbia River environmental injustices (early 1900's) and current (2019-2020) redemptive social justice strategies in the context of: The strategic removal of the cultural icon and dietary staple (Early 1900's), Pacific Lamprey, and the strategic replacement of that species into native Columbia River fishery habitats as well as the Indigenous communities who continue to gather this historically managed "Trash Fish". Indigenous communities, despite forced acculturation are willing to share a type of belief system that can benefit not only future generations of the tribal-academic partnerships but people in general. This is a case of Socio-ecological dynamics and Environmental Health Science where we question the Environmental History of the cultural icon and dietary staple of Columbia River people, "Asum" the Pacific Lamprey.

