Spokan Ethnoichthyology

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Increased interest has been centered on fisheries science within the last few decades in the Pacific Northwest, and much concern has been focused on the status of anadromous fish, particularly salmon. The effects of environmentally damaging activities, such as dam building, logging, mining, agriculture, and commercial fishing, have only added to the various efforts to characterize what the Columbia River system and anadromous fish were like, both synchronically and diachronically.

The first fishers on the Columbia River, or for that matter in North America, were Native Americans. Their lifeways, whether fisherfolk or not, were sustainable with the environment. It was not until Euroamerican incursion that largescale ecological damage began to take place, and this damage has occurred only within the last 150 or so years in the Pacific Northwest. We have much to learn from the aboriginal cultures that were successful in maintaining a sustainable relationship with their environment.

In order to plan an appropriate human/natural environment we must characterize, through the best of our abilities, the relationship of the aboriginal peoples of the Pacific Northwest with the natural world, particularly the aquatic world. Unfortunately, this research problem was exacerbated by the simple fact that contemporaneous with the ecological/environmental ruin of the Pacific Northwest, was the virtual destruction of the Native Americans and their lifeways!

The collection of research data has been difficult since there is a paucity of aboriginal fisheries information for the Pacific Northwest, and in particular the Upper Columbia River drainage. Considerable damage was sustained by these drainages long before there was any systematic effort to collect fisheries information. A general impetus to gathering and analyzing fishery data was, and continues to be, the direct result of Native American litigation and claims to the destruction and loss of fish, claims that have involved biologists and anthropologists alike. Consequently, the ethnoscientific scope of the present paper is different than the majority of aboriginal fisheries research that has been conducted in the past (Walker 1967; Hewes 1973; Smith 1979; Scholz *et al.* 1985; NWPPC 1986a, NWPPC 1986b; NWPPC 1986c). These reports have focused primarily on techniques and per capita consumption of anadromous fish, as well as the theoretical foundation of an anadromous fish resource (Schalk 1977). While this information is important to the overall picture of the aboriginal relationship to the ichthyological world, the present paper focuses on the cognitive view that the Spokan had of fish in general and anadromous fish in particular.

Therefore, the primary purpose of the present research is to record what remains of Spokan ichthyofaunal terminology. This work, by necessity, is salvage ethnography–more accurately–forensic ethnography. There are few native speakers of Spokan left, and with each additional death of a fluent or semi-fluent speaker, the pool of knowledge decreases. Therefore, it is imperative that the knowledge that these few individuals possess–whether ideographic or cultural–be collected and preserved.

Ethnobiological Theory

Ethnobiology is the study of relationships between the floral and faunal world to that of past and present human societies (Berlin 1992). These relationships include such diverse topics as faunal assemblages in archaeological sites to the medicinal uses of plants in a particular culture. But principally, ethnobiology deals with two distinct questions: 1) "How and in what ways do human societies use nature?", 2) "How and in what ways do human societies view nature?" (Berlin 1992:4).

Ethnobiology's theoretical orientation has been dominated, until relatively recently, by the economic focus. It was during the late 1950's and early 1960's when the first cognitively oriented ethnobiologies were created (Conklin 1954; Conklin 1962; Frake 1961, 1962; Romney and D'Andrade 1964), which was a radical departure from the earlier economic focus.

Brent Berlin is the most vocal adherent of the second school of thought, for he argues " . . . that human beings everywhere are constrained in essentially the same ways–by nature's basic plan–in their conceptual recognition of the biological diversity of their natural environments" (1992:8). He further argues that ". . . [w]hen human beings function as ethnobiologists, however, they do not construct order, they discern it" (1992:8).

What is it about the organic world that makes Berlin assert that humans discern order rather than construct it? He argues:

> "[that] groups of plants and animals present themselves to the human observer as a series of discontinuities whose structure and content are seen by all human beings in essentially the same ways, perceptual givens that are largely immune from the variable cultural determinants found in other areas of human experience" (1992:9).

He further maintains that:

> ". . . while human beings are capable of recognizing many distinct patterns in nature's structure in general, in any local flora or fauna a single pattern stands out from all of the rest. This overall pattern has been referred to by systematic biologists as the natural system. The natural system becomes manifest presumably because of the human ability to recognize and categorize groups of living beings that are similar to one another in varying degrees in their overall morphological structure, or morphological plan" (1992:9).

Consequently, one must ask what are the processes of ethnobiological classification? As was stated previously, human beings have an natural capacity for classification and categorization. In any local biological system only a small portion of the biological spectrum is present. So then how do people make sense of their environment? The biological world makes sense of it for them, by already existing in generally discrete categories, people then discern that structure and create a cognitive scheme to account for it. In creating an ethnobiological classification system, one has to begin somewhere; that discernible point is the most easily recognizable, most salient groups. Berlin calls these groups "folk generics," or the folk genus (1992:10). He further defines the folk genus as a " . . . segment of biological reality [which] literally jumps out at the viewer, . . . which represent such obvious perceptual units as to be recognized almost automatically" (Berlin 1992:10). These units are

the folk biological anchors, and from these points superordinate and subordinate categories can be made.

General Principles of Ethnobiological Classification

To appreciate any ethnobiological system, it is necessary to delineate various principles that support floral and faunal classification. The general principles of ethnobiological classification are derived from Berlin's seminal work (1992:21-26), and will be listed and discussed separately.

Principles of Ethnobiological Categorization

1. In local areas of any traditional indigenous society there will be an ethnobiological classification system for a smaller portion of the total number of animal and plants residing in that locality.

This smaller portion of the total number of organisms is comprised of the most salient organisms in that local habitat, where saliency is a function of biological distinctiveness.

2. Ethnobiological classification is based primarily of observable morphological and behavioral characteristics of the organisms in a local habitat.

3. Recognizable floral and faunal taxa are grouped into more inclusive groups to form a taxonomic structure consisting of a small number of taxonomic ranks.

These taxonomic ranks refer to 6 levels in a ethnobiological system.

4. Recognizable ethnobiological taxa are taxonomicaly distributed as members of six mutually exclusive ranks.

5. In all systems of ethnobiological classification, taxa of each rank display systematic similarities in their relative numbers and biological content.

a. The most numerous taxa in an ethnobiological system will be the taxa of generic rank. This occurs because taxa of generic rank are the taxa that are the most easily recognizable.

b. Taxa of life form rank mark a smaller number of highly distinctive morphological types.

c. Taxa of specific rank subdivide the folk genus, and the varietal rank subdivides the specific, and

d. the kingdom rank is unique in that it consists of only one a single member, all other ranks are included within this rank.

6. Taxa of generic rank display a specific internal structure where some members of a taxon show prototypicality effects.

Prototypicality effects are such that one member of a taxon may be a better representative of that taxa than another organism of the same taxa. In other words one is a better example than the other.

7. Within the taxa recognized in any folk biological system a large majority of those correspond closely to that of modern systematic biology.

Within the folk biological system, the various ranks (kingdom–varietal) variably correspond with academic biological taxonomy. For example, the ethnobiological rank of life-form shows the least correspondence with Western systematics, whereas the taxa of intermediate rank correspond

closely to the of the Western systematic rank of family. This correspondence also depends on the type of organism classified. For example,

> ". . . higher vascular plants and larger vertebrate animals, generic taxa often approximate in their content the genera and species of Western scientific biology. For the smaller vascular plants, lower cryptogams, smaller vertebrates and many invertebrates, the correspondence of folk generic taxa more closely approximates scientific taxa of the ranks of family, order, or class" (Berlin 1992:25-6).

Principles of Ethnobiological Nomenclature

The term nomenclature refers to the rules under which indigenous peoples name their local flora and fauna. Studying how people name their organisms reveals much about the way that they conceptualize the living things in their environments (Berlin 1992). The following list is adapted from Berlin (1992:26-31):

1. Higher level ethnobiological ranks (i.e. kingdom, intermediate) are generally not named.

2. In ethnobiological lexicons, the names for the taxa are of two basic types: primary and secondary names. Each of these two basic structural types can be distinguished from each other on the basis of linguistic, semantic, and taxonomic properties.

a. Linguistically, primary names may be simple (e.g. dog, cat, maple) or complex (skunk cabbage, forget-me-not, bluebird). In contrast secondary names are always linguistically complex (small-mouthed bass, large-mouthed bass, black crappie).

b. Semantic and taxonomic criteria show that linguistically complex primary names are of two structural types, productive and unproductive.

Productive forms include a constituent that labels a taxon superordinate to the form in question (e.g. catfish, blackbird). In opposition to this unproductive forms do not mark superordinate categories (e.g. prairie dog, silverfish, buckeye). In any of these forms the referent is not a kind of what is referred to.

c. Secondary names are linguistically complex expressions, one of whose constituents indicates a category superordinate to the form in question (e.g. red maple, bulldog). Secondary names differ from primary productive expressions in that secondary names occur in contrast sets whose members share a constituent that labels the taxon that immediately includes them.

3. Generic taxa, life-form, and intermediate taxa are labeled by primary names, while subgeneric taxa are labeled by secondary names.

4. Under certain specialized circumstances subgeneric taxa may be given primary names.

a. A subgeneric taxon may be named with a primary name if it is considered to be a prototype of the genus.

b. A subgeneric taxon may be labeled with a primary name when that taxon is of high cultural importance.

	Tinca tinca	Tench	Spokane(pond), Diamond Lake, WA 1895-96
Ictaluridae	*Ictalurus natalis*	Yellow bullhead	
	I. nebulosus	Brown bullhead	Washington 1882-83
Centrarchidae	*Lepomis gibbosus*	Pumpkinseed	Willamette River, OR 1893
	L. macrochirus	Bluegill	Loon Lake, WA 1890
	Micropterus dolomieui	Smallmouth bass	California 1874
	M. salmoides	Largemouth bass	Washington 1890-95
	Pomoxis annularis	White crappie	Washington 1890,92
	P. nigromaculatis	Black crappie	Near Spokane, 1890,92
Percidae	*Perca flavescens*	Perch	Loon Lake, WA, 1890-92
	Stizostedion vitreum	Walleye	No date

Historically, the following four species of anadromous fish were present in the Spokane river: the Pacific lamprey (*Entosphenus tridentatus*), chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and the steelhead (*Oncorhynchus mykiss*). None exist in the river at the present time.

The Ethnoichthyology

The ethnoichthyological system that the Spokan have developed is remarkable in its cognitive economy. While not parsimonious, the Spokan system corresponds well with biological reality.

Table 3. Spokan Fish Terms Exclusive of Terms Superordinate of the Folk Genus
(Osterman 1995)

Family	Scientific Name	Common Name	Spokan Term	
Petromyzontidae	*Entosphenus tridentatus*	Pacific sea lamprey	k^{w}utul	
Acipenseridae	*Acipenser transmontanus*	White sturgeon	cmtus	
Salmonidae	*Oncorhynchus clarki*	Cutthroat trout	hičq^{w}iq^{w}ays	
	O. kisutch	Coho salmon	čsu?	sč'lw'es
	O. mykiss	Steelhead	x^{w}mene?	
		Rainbow	x^{w}x^{w}mene?	
	O. tshawytscha	Chinook salmon	čsu?	smłič
	Salmo trutta	Brown Trout*	No specific term	
	Salvelinus confluentus	Bull trout	ł?ay	
	Salvelinus fontinalis	Brook trout*	No specific term	
	Coregonis clupeaformis	Lake whitefish*	None recorded	
	Prosopium williamsoni	Mountain whitefish	x^{w}x^{w}y'ucn'	
Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth	None recorded	
	Cyprinus carpio	Carp*	mcic'e?	
	Mylocheilus caurinus	Peamouth	c'q^{w}cin	
	Ptychocheilus oregonensis	Northern squawfish	q'e?č	
	Richardsonius balteatus	Redside shiner	No specific term	

5. Plant and animal names commonly refer metaphorically to a typical morphological, behavioral, ecological, or qualitative characteristic of their referent.

Ichthyology

It is difficult to present a definitive species list for the fish present in the Spokane river, as the Washington Department of Fish and Wildlife does not at present have a list of fish that inhabit the Spokane river. The following lists are based on fisheries work conducted by Gilbert and Evermann (1895), Fulton (1968 and 1970) and the work of the Upper Columbia United Tribes Fisheries Center. Table 1 identifies the 20 native species of fish that inhabited the Spokane river, four of these species being anadromous fish. This list is not exhaustive, however, as meticulous collecting has never been done on the river due to its large size and difficulty of applying capture procedures.

Table 1. Native Species List
(After Wydoski and Whitney 1979)

Family	Scientific Name	Common Name
Petromyzontidae	*Entosphenus tridentatus*	Pacific sea lamprey
Acipenseridae	*Acipenser transmontanus*	White sturgeon
Salmonidae	*Oncorhynchus clarki*	Cutthroat trout
	O. kisutch	Coho salmon
	O. mykiss	Steelhead/Rainbow
	O. tshawytscha	Chinook salmon
	Salvelinus confluentus	Bull trout
	Prosopium williamsoni	Mountain whitefish
Cyprinidae	*Acrocheilus alutaceus*	Chiselmouth
	Mylocheilus caurinus	Peamouth
	Ptychocheilus oregonensis	Northern squawfish
	Rhinichthys cataractae	Longnose dace
	R. falcatus	Leopard dace
	R. osculus	Speckled dace
	Richardsonius balteatus	Redside shiner
Catostomidae	*Catostomus catostomus*	Longnose sucker
	C. columbianus	Bridgelip sucker
	C. macrocheilus	Largescale sucker
Gadidae	*Lota lota*	Burbot
Cottidae	*Cottus beldingi*	Piute sculpin
	C. rotheus	Torrent sculpin

It is quite possible, for example, that other species of sculpin exist in the river, but that have never been collected, or have been mis-identified as they are difficult to key in the best of conditions. Beginning in the latter part of the 19th century, 15 other species were introduced into the area (see Table 2). The exact date of the introduction of these fish into the Spokan river is not known.

Table 2. Introduced Species List with Date of Introduction
(After Widosky and Whitney 1979)

Family	Scientific Name	Common Name	Introduction Date
Salmonidae	*Salmo trutta*	Brown Trout	United States 1900
	Salvelinus fontinalis	Brook trout	No date
	Coregonus clupeaformis	Lake whitefish	Washington 1899
Cyprinidae	*Cyprinus carpio*	Carp	Washington 1882

	Rhinichthys cataractae	Longnose dace	No specific term	
	R. falcatus	Leopard dace	No specific term	
	R. osculus	Speckled dace	No specific term	
	Tinca tinca	Tench*	None recorded	
Catostomidae	*Catostomus catostomus*	Longnose sucker	No specific term	
	C. columbianus	Bridgelip sucker	No specific term	člene?
	C. macrocheilus	Largescale sucker	No specific term	
Ictaluridae	*Ictalurus natalis*	Yellow bullhead*	No specific term	
	I. nebulosus	Brown bullhead*	No specific term	
Gadidae	*Lota lota*	Burbot	None recorded	
Centrarchidae	*Lepomis gibbosus*	Pumpkinseed*	None recorded	
	L. macrochirus	Bluegill*	None recorded	
	Micropterus dolomieui	Smallmouth bass*	No specific term	
	M. salmoides	Largemouth bass*	No specific term	
	Pomoxis annularis	White crappie*	None recorded	
	P. nigromaculatis	Black crappie*	None recorded	
Percidae	*Perca flavescens*	Perch*	c'qc'iq	
	Stizostedion vitreum	Walleye*	None recorded	
Cottidae	*Cottus beldingi*	Piute sculpin	None recorded	
	C. rotheus	Torrent sculpin	None recorded	

Terminology

Of the twenty native and fifteen introduced fish species, the Spokan have created eleven terms that correspond directly with individual species, ten terms that cover groups of closely related fish species, and one that covers all fish species; and, while not named, two covert categories that correspond to migratory and non-migratory. Ten of twenty native fish species are directly labeled; whereas, only two of fifteen introduced fish are directly named. In the following sections, each individual Spokan term for individual fish species will be discussed, and all are tabulated in Table 4.

Table 4. Spokan Fish terms by Ethnobiological Rank
(Osterman 1995)

Ethnobiological Rank				English Name
Life Form	Intermediate	Generic		
sw'ew'ɬ				any fish
	Covert Category Migratory Fish			Migratory Fish
		kʷutul		Pacific lamprey
		čsu?		any salmon
			smɬič	chinook salmon
			sč'lw'es	coho salmon
		xʷmene?		steelhead
	Covert Category Resident Fish			Resident Fish
		cmtus		white sturgeon

		pisɬ or tu?eckʷ		any trout
			xʷxʷmene?	rainbow trout
			ɬ?ay	bull trout
			hičq'ʷiq'ʷays	cutthroat trout
		xʷxʷy'ucn'		mountain whitefish
		nɬcic'e?		carp
		c'qʷcin		peamouth
		ɬq'ene?č or sxʷimine?		minnow
		q'ʷe?č		northern squawfish
		člene?		any sucker
		ncucawane?, sttm'al'qs, or ?upupcin		bullhead
		ɬq'ɬaq't		bass
		c'qc'iq		perch

Taxa of Life form Rank

The term (/sw'ew'ɬ/–from [weɬkʷ] or [weɬ] "to go down", of life form rank, delimits the domain of all fish. The internal structure of the /sw'ew'ɬ/ domain is very similar to that of Hunn's (1980) Sahaptin fish classification, and closely resembles the taxonomy of systematic biology.

Taxa of Intermediate Rank

The two categories, one representing migratory fishes, the other denoting resident fish, are not labeled. These covert categories are of Intermediate rank and fall in between the anchor rank of folk genus, and the domain encompassing life form rank. As stated in the introduction, the majority of terms of intermediate rank are not labeled.

These covert categories, as in many folk taxonomies, are based on behavioral characteristics rather than morphological characteristics, and so denote a behavioral dichotomy that the rest of the classification system is based upon. This also reflects the cultural importance that the Spokan placed on anadromous fish (Hunn 1980). It is possible that the Spokan labeled these terms in aboriginal classifications, but have lost them in the recent past because of a shift away from dependence upon fish, reduced fish populations, and of course, the general loss of the Spokan language.

Taxa of Generic Rank

In this section each generic label will consist maximally of the common/scientific names, Spokan name(s), and where applicable meaning, and term concordance with the Colville Okanagan (COT) fish terminology (Bouchard and Kennedy 1975). Cultural significance will also be discussed.

1. Pacific lamprey–*Entosphenus tridentatus* /kʷutul/ COT /kʷutwen/

The lamprey was considered an important food and as a signal that the salmon runs were soon to follow. Lamprey were collected from rock faces where they were attached by their oral disks.

2. White sturgeon–*Acipenser transmontanus* /cmtus/ COT /c'em'tus/

The sturgeon was a food, and was one of the first fish taken in the spring. It may have been taken in the Spokan river, probably near the confluence of the Spokane and the Columbia rivers. It was known to be taken at Kettle Falls. Sturgeon were harvested in the early spring by means of an articulated harpoon, and required assistance to be landed. Sturgeon was valued for meat and particularly for fat deposits which was used as a base for yellow and red ochre paints (Ross 1993).

Interestingly, the term for whale /smtus/ only differs in the word initial phoneme. Obviously this term refers to the large size of both organisms.

3. Any salmon–*Oncorhynchus spp.* /čsuʔ/

3a. Chinook salmon–*O. tshawytscha* /smɬič/ "[miɬ]–many [ič]– backs" COT /ntitiyix/

Chinook salmon were the largest anadromous fish in the Upper Columbia drainage, and they were the most valued food fish.

3b. coho salmon–*O. kisutch* /sč'lw'es/ COT /kisuʔ/

Coho were also a valued food fish. The term also means a spawned out or dying salmon.

4. steelhead–*O. mykiss* /xʷmeneʔ/ "[xʷem]–pink [eneʔ]– side of head" COT /nqʷiqʷiyaʕc'aʔ/

Steelhead was a much valued food source. The term also refers to the Little Spokane River and the Middle band of the Spokan Indians /snxʷeneʔ/ who resided along the Little Spokane River, and therefore indicate the importance of fish to the aboriginal diet.

5. Any trout /pisɬ/ or /tuʔeckʷ/ COT /xʷeminaʔ/

Other terms associated with the term trout were terms that usually referred to the size of the fish. Both /ččiweʔ/ and /pipsɬ/ refer to small trout, note diminutive reduplication.

5a. Rainbow trout–*O. mykiss* /xʷxʷmeneʔ/ "little pink side of face– see steelhead" or /pisɬ/ COT /xʷeminaʔ/

There is confusion over the correct term for rainbow trout. The term collected for rainbow trout was /pisɬ/, but if the Spokan considered the steelhead and the rainbow to be related, the logical term would be /xʷxʷeneʔ/. This term was collected on the Colville Indian Reservation from a family who speak the Moses language. Again, the loss of language regarding fish is apparent.

5b. Cutthroat Trout–*O. clarki* /hičqʷiqʷays/ "[qʷay]–black" COT /pisɬ/

Term collected through the *Spokan Dictionary* (Carlson and Flett 1989)and *Spokane Vocabulary Notebooks*. Terminological provenience is not known.

5c. Bull trout–*Salvelinus confluentus* /ɬʔay/ COT /ʕayckst/

Term collected through *Spokan Dictionary* (Carlson and Flett 1989) and *Spokane Vocabulary Notebooks*. Terminological provenience is not known.

6. Mountain whitefish–*Prosopium williamsoni* /χʷχʷy'ucn'/ "[χʷiy] it's sharp" COT /χʷeχʷiy'ucn/

7. Carp–*Cyprinus carpio* /nɬcic'eʔ/ COT /ɬeq'ɬaq't/

Term collected through *Spokan Dictionary* (Carlson and Flett 1989) and *Spokane Vocabulary Notebooks*. Terminological provenience is not known.

8. Peamouth–*Mylocheilus caurinus* /c'qʷcin/ "[cin] mouth" COT /ceqʷcin'/

Term collected through *Spokan Dictionary* (Carlson and Flett 1989) and *Spokane Vocabulary Notebooks*. Terminological provenience is not known.

9. Minnow–*Rhinichthys sp., Richardsonius sp.* /ɬq'eneʔč/ "[ɬaq'] wide" or /sxʷimineʔ/ COT Diverse.

The Spokan apparently did not recognize individual species of *Rhinichthys* or *Richardsonius* and apparently included them under one term. Note the similarity between the Spokan term /sxʷimineʔ/, and the English term minnow. It is the author's opinion that this is a 'Spokanized' term and should not be considered as the original term for minnow. Again it is posited that the Spokan labeled the individual species of these genera but that those terms are lost, particularly since the COT (Bouchard and Kennedy 1975) and Sahaptin (Hunn 1980) had terms for these species.

9. Northern squawfish–*Ptychocheilus oregonensis* /qʼʷeʔč/ COT /qʼʷeqʼʷaʔk/

The squawfish was considered a food. /qʼʷeʔč/ is an onomatopoeic term referring to the sound that the fish makes when it is caught.

10. Any sucker(s)–*Catostomus spp.* /členeʔ/ "[čl]–it hangs down, [eneʔ] face." COT /qixwlx/

The Spokan apparently did not name individual sucker species. However, it is highly probable that the terms for individual sucker species are lost. The COT named all sucker species in their area, as did most Sahaptin groups.

The Sucker was an important non-anadromous fish, used for food and as a mythological character. Hunn (1980) argues that it was the most important non-anadromous fish in the Sahaptin range. The Spokan elders recall the sucker was mentioned in myth. The Sucker is unique among other fish since the Sucker has a myth cycle associated with the bones of the cranium, as the sutures in the cranium do not completely ossify, but fall apart during cooking. Consequently, each bone was named and a story was associated with it. The Suckers' bones and the associated stories, were an important enculturative tool. The researcher was unable to collect the myth cycle, as it has apparently been lost.

11. Bullhead(s)–*Ictalurus spp.* /ncucawaneʔ/ "[co] fringed" /sttm'al'qs/ /ʔupupcin/ " [wup] hairy [cin] mouth, they have beards like the Amish"

The bullhead is an introduced fish. The terminological diversity associated with this fish species is probably owing to its relatively recent introduction, and that terminological standardization has not occurred.

12. Bass–*Micropterus spp.* /ɬqʼɬaqʼt/ "[ɬaqʼ] wide"

Term collected through *Spokan Dictionary* (Carlson and Flett 1989) and *Spokane Vocabulary Notebooks*. Terminological provenience not known.

13. Perch–*Perca flavescens* /c'qc'iq/ "[c'iq] prickly"

Term collected through *Spokan Dictionary* (Carlson and Flett 1989) and *Spokane Vocabulary Notebooks*. Terminological provenience not known.

14. Unidentified fish. /t'w'eck^{w}/ "little black sucker"

This fish term could not be identified with any local fish, and is claimed to be extinct.

Unidentified Fish

There were several native fish that the Spokan apparently had no name for. As was stated previously the various species of minnow, *Rhinichthys cataractae, R. falcatus, R. osculus, and Richardsonius balteatus* were not individually identified. This was also true for the suckers *Catostomus catostomus, C. columbianus, and C. macrocheilus* .

In addition to these species complexes, the most morphologically distinctive fish, other than the lamprey, the burbot (*Lota lota*), was not identified. The Colville Okanagan people labeled the burbot /speq^{w}lič/. It is improbable that the Spokan did not have a term for this fish. This fish, with it morphological distinctiveness, must have been named. It is the author's opinion that this fish was probably named, but that name has been lost.

The Chiselmouth (*Acrocheilus alutaceus*) was not identified.

Another distinctive kind of fish not labeled are the sculpins (*Cottus spp.*). The Colville Okanagan people termed these fish /pux^{w}px^{w}asxn/ but considered them to be only an immature burbot (Bouchard and Kennedy 1975:17).

The introduced fish *Lepomis spp.* and *Pomoxis spp.* were not named, nor were the tench (*Tinca tinca*) and the walleye (*Stizostedion vitreum*). These fish may have names, but the informants and sources consulted did not indicate any descriptive knowledge.

Classification

The Spokan fish classification system is an elegant system that reifies important cultural values, as well as being based on accurate biological principles. Figure 1. shows the complete classification system. As previously stated, the classification was bifurcated on the basis of a migratory/resident dichotomy. This arrangement is also seen with the fish classifications of Sahaptin speaking groups of the Plateau (Hunn 1980; Hunn 1990). Hunn convincingly argues that this taxonomic arrangement reflects the significant role that migratory fish played in aboriginal Sahaptin culture. Within the Spokan *Weltanschaung* it was apparently no different.

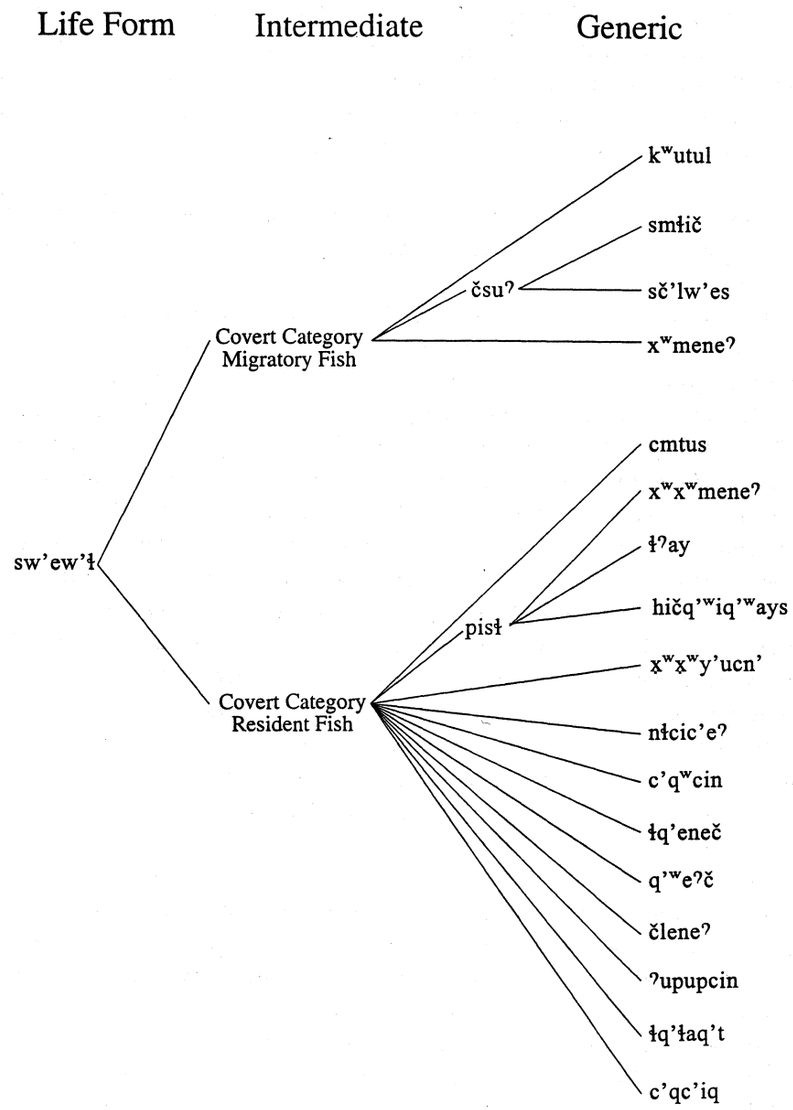

Figure 1. Spokan Fish Classification
(Osterman 1995)

As anadromous fish were the most important of all fish, in terms of dietary importance, it is therefore logical that they should be classed in a similar way.

The terms for anadromous fish and resident fish were not named, but this does not mean that they did not exist, or that these categories were not of significant value. All informants consulted knew the life ways or habits of these fish. They knew that when shown a salmon, that they only came at one time in the year, that in fact they were migratory. The converse was true as well, that when shown a sucker, the Spokan stated that these fish were resident fish, that they did not leave and then return.

All salmon, and all trout found within the Spokan aboriginal area, were individually named. These generic names were classed under a broader generic term, one for salmon /čsuʔ/ and one for trout /pisɬ/.

The overall internal structure of the Spokan classification for fish is very similar to Hunn's Sahaptin classification. Hunn (1980), in his analysis, lays down a heuristic framework for the understanding of the classification system. In Sahaptin, the internal structure of the classification is subdivided into two broad categories: one referring to salmon, the other referring to "residual small fish" (Hunn 1980:11). This term also is the designation for the largescale sucker. The salmon/sucker dichotomy reflects the economic utility that both fish share. While salmon were by far the more important of the two, the sucker was economically valuable when they began to spawn in February. At this point in time, winter stores were low and frequently required replenishment because of prolonged winter, loss of stored salmon, and contamination of stored fish. First fruit ceremonies were held for the first collections of biscuit root and the harvesting of spawning suckers. Ethnographically recorded ritual thereby substantiates that both the salmon and sucker were valuable; salmon for the large number that spawned in the rivers that proved to have been a super-abundant resource; and sucker which were valuable in the late winter when stored food sources were low.

It is difficult to tell if the Spokan classification system is 'two-tailed' in the same way that the Sahaptin classification was, where the sucker fish played such an important role. Unfortunately, there is a lack of past or present ethnographic data on the status of the sucker in Spokan cultural life.

Conclusion

In conclusion, the Spokan had a terminological and classification system for the greater part of the ichthyofauna present in their area. The terminological system consisted of 23 generic taxa(5 sub-generic), two covert intermediate taxa, and one life form taxa. In general, the epithets or labels used for individual species are primarily based on morphological characteristics of the particular species; however, some terms are based on behavior or onomatopoeia.

The classification system is hinged on the dichotomy between anadromy and non-anadromy. The dichotomy reflects and reinforces the significant role that anadromous fish play in their cultural as well as dietary lives.

Literature Cited

Berlin, Brent
1992 *Ethnobiological Classification: Principles of Categorization of Plant and Animals in Traditional Societies*. Princeton: Princeton University Press.

Bouchard, Randy and Dorothy I.D. Kennedy
1975 Utilization of Fish by the Colville Okanagan Indian People. Ms., Victoria, British Columbia Indian Language Project.

Carlson, B. and P. Flett
1989 Spokane Dictionary. *University of Montana Occasional Papers in Linguistics*, No. 6.

Conklin, H.C.
1954 The Relation of Hanunoo Culture to the Plant World. Ph.D. diss., Yale University.

1962 The Lexicographical Treatment of Folk Taxonomies. *International Journal of American Linguistics* 28:119-41.

Fulton, Leonard
1968 Spawning Areas and Abundance of Chinook Salmon in the Columbia River Past and Present. *Fish and Wildlife Service Special Scientific Report--Fisheries*. No. 571.

1970 Spawning areas and Abundance of Steelhead Trout and Coho, Sockeye, and Chum Salmon in the Columbia River Basin--Past and Present. *National Marine Fisheries Special Scientific Report-Fisheries*. No. 618.

Frake, C.O.
1961 The Diagnosis of Disease among the Subanun. *American Anthropologist* 63:11-32.

Gilbert, C.H. and B.W. Evermann
1894 A Report Upon Investigations in the Columbia River basin with Descriptions of Four New Species of Fish. *Bulletin of the U.S. Fish Commission* 14:169-207.

Harshburger, J.
1896 Purposes of Ethnobotany. *Botanical Gazette* 21:146-54.

Hewes, Gordon W.
1973 Indian Fisheries Productivity in Pre-Contact Times in the Pacific Salmon Area. *Northwest Anthropological Research Notes* 7(2):133-155.

Hunn, Eugene
1980 Sahaptin Fish Classification. *Northwest Anthropological Research Notes* 14(1):1-19.

1990 *Nch'i-Wana "The Big River": Mid-Columbia Indians and Their Land*. Seattle: University of Washington Press.

Northwest Power Planning Council (NPPC)

1986a Appendix D of the 1987 Columbia River Basin Fish and Wildlife Program: Compilation of Information on Salmon and Steelhead Losses in the Columbia River Basin: Appendices. Northwest Power Planning Council. March, 1986.

1986b Appendix D of the 1987 Columbia River basin Fish and Wildlife Program: Compilation of Information on Salmon and Steelhead Losses in the Columbia River Basin. Northwest Power Planning Council. March, 1986.

1986c Appendix E of the Columbia River Basin Fish and Wildlife Program: Numerical Estimates of Hydropower-Related Losses. Northwest Power Planning Council.

Osterman, Deane R.
1995 The Ethnoichthyology of the Spokan Indian People. Unpublished M.S. Thesis. Eastern Washington University, Cheney, WA.

Romney, A.K. and R. D'Andrade
1964 Cognitive Aspects of English Kin Terms. *American Anthropologist* 66:140-70.

Ross, John Alan
1993 An Ethnoarchaeological Cultural Resource Survey of the Spokane Indian Reservation. Spokane tribe of Indians Internal Report.

Schalk, Randall F.
1977 The Structure of an Anadromous Fish Resource. In *For Theory Building in Archaeology*. Lewis R. Binford, ed. New York: Academic Press.

Scholz, Allan, et al.
1985 Compilation of Information on Salmon and Steelhead Total Run Size, Catch, and Hydropower Related Losses in the Upper Columbia River Basin, Above Grand Coulee Dam. Upper Columbia United Tribes. Fisheries Technical Report No. 2.

Smith, Courtland L.
1979 *Salmon Fishers of the Columbia*. Corvallis: Oregon State University Press.

Walker, Deward E. Jr.
1967 Mutual Cross-Utilization of Economic Resources in the Plateau: An Example from Aboriginal Nez Perce Fishing Practices*Washington State University, Laboratory of Anthropology*. Report of Investigations, No. 41.

Wydoski, R.S. and R. Whitney
1979 *Inland Fishes of Washington*. Seattle: University of Washington Press.