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Accessing Traditional Ecological Knowledge of First Nations in British Columbia Through Local Common Names in FishBase

by
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Fish Names as Traditional Ecological Knowledge

In North America, many place names are borrowed from First Nation languages, but the original meanings with valuable historical information may not be well known. Similarly, First Nation's common names for fish, birds, marine mammals or land animals often reveal special characteristics of these species such as their appearance, behaviour or even ecological relationships. The intimate knowledge that First Nations had about their local environment is sometimes referred to as Traditional Ecological Knowledge (TEK). This article describes efforts to combine TEK as related to First Nation's names for marine fish, and make it publicly available through a global database called FishBase.

FishBase is available both on annually updated CD-ROMs, and on the Internet (see www.fishbase.org). It presents information on the biology of fishes –including those of B.C. - extracted from a variety of sources, including TEK compiled from several other areas of the world (Palomares et al. 1993; Pauly et al. 1993).

Given that common names are how most people in the world refer to fish, and FishBase is meant to be accessible to people other than scientists, access to FishBase and the TEK that we are just starting to gather, is available using the common names of fishes, in any of the world's 5000 languages. The common names in First Nation languages (usually extracted from a specialized dictionary for the language in question), are linked to the most likely species corresponding to it (and hence to a scientific name), and TEK that is meant to be shared may be added. [Note that this procedure generally relies on published sources (see references below), and hence does not reveal TEK not meant to be shared.]

Having applied this procedure to several of the First Nation languages of B.C. notably Haida and Tsimshian, we now want to share the result of this work, so that it may be readily available to teachers in Aboriginal communities, scholars and others interested in the rich TEK of B.C.'s First Nations (see also Palomares et al. 1999).

Haida Fish Names (by Russ Jones)

Haida fish names and some TEK has been gathered by several researchers, in particular David W. Ellis for the Skidegate dialect and Margaret Blackman for the Massett dialect (see Jones 1999). Compiling Haida names was complicated by dialectic differences and the lack of a standard phonology and dictionary. Spelling and translation of Skidegate names was checked by a group of fluent Haida speakers (the Skidegate Haida Immersion Program) who are documenting and developing a standard system for writing Skidegate Haida. Following are a few examples of TEK gathered in relation to the Skidegate Haida names:

x̲agu [1] or Pacific halibut (*Hippoglossus steolepsis*) was an important staple food and trade item for the Haida due to its' year-round availability, large size and good preservative qualities. An old Haida saying "When the salmonberries are ripe, the halibut are in the kelp" reveals knowledge about the time and place for successful fishing that is related to

hook that was adopted by the commercial longline fishery in the early 1980s. {Trials have shown that the circle hook is more efficient at hooking and retaining halibut than the J-shaped hook (International Pacific Halibut Commission, 1993). Halibut fishing locations, called *gyu* and located by landmarks or ranges, are said to be all named and owned by Haida clans or families.

tyaayii (S) or *c*oho salmon (*O. kisutch)* could be caught in the late fall when there were no other salmon in the creeks. Fresh coho were an esteemed food and were eaten fresh, smoked as coho fillets and dried in strips as *ts'ilgi*. The eggs and milt were also eaten. The last run of coho in November was referred to as *Gaayda dahlgyang* which means laterally "needlefish in belly of coho", and indicate the forage fish available at that time of the year. Coho returning January/ February were referred to as *ts'iing k'ii ga* or "sharp tooth", which indicates the change in appearance once salmon have been in freshwater and the end of a run.

k'aaxada refers to the Spiny dogfish (*Squalus acanthias*). Dogfish were seen to be related to other species of shark as indicated by the name for a large shark of any species, *k'aaxada a7wga*, which has the literal meaning "dogfish mother".

gaadaa (S) means "white" in Haida name and refers to the Shiner perch (*Cymatogaster aggregata)*. This is similar to the common name "Shiner" in that it describes a general feature of this species (the color).

skil is the Haida name for Sablefish or black cod (*Anoplopoma fibria*). Interestingly, Skil is also cited as an English common name for this species in the "Pacific Fishes of Canada". This probably arises because James Swan used the Haida name skil for samples of fish that he bought from Haida fishers in 1905.

The Haida nickname for Lingcod (*Opiodon elongatus)* is *sgaagaay*. It means "shaman dance" and refers to the way a shaman shakes his head when dancing (Skidegate Haida Immersion School). Anyone who has brought a lingcod in on a line will easily relate this to the way a lingcod shakes its head when hooked that may also be used when capturing prey.

Further work could be done on Haida fish names, particularly the Massett and Alaskan dialects. Accurate work is hampered by the fact that most young Haida no longer speak the language and often haven't grown up fishing and spending time on the water. Related work on Haida place names is underway in a project involving Parks Canada (Gwaii Haanas Haida Heritage Site) and the Skidegate Haida Immersion Program.

Tsimshian Fish Names (by Stephen Watkinson)

Archaeological evidence shows that the Tsimshian have occupied their B.C. coastal sites for over ten thousand years (Seguin1985). Unfortunately, this long occupation and the store of TEK this entails, reflected in a rich oral tradition, is largely unavailable in published form. Moreover, there is great concern that traditional knowledge is not being passed on as readily as it was in the past, mainly because of the gradual erosion of our language, Sm'algyax. As a non-speaker of Sm'algyax, I am the living proof of this.

On the other hand, there are procedures to recover and/or preserve some TEK, and one of these is to catalogue and annotate the terms used by the local people to describe the flora and fauna of a given area (see above, and Danko 1998, Preikshot and Leer, 1998, Jones 1999). Such a catalogue, when annotated with information pertaining to abundance, distribution, and behavior of organisms, can be a useful source of qualitative information to supplement scientific study.

As a non-speaker of Sm'algyax, I had to rely on the work of Dunn (1978) who created a dictionary of Tsimshian words. Wherever I could, I added scientific names, and a few comments that seemed appropriate. Here are a few examples:

Gaax, gaag-, gakgak: Black bass (Pacific sea bass) - B.C. fishers usually refer to the black rockfish (*Sebastes melanops*) when they use the name 'black bass;'

Hadani: Black cod - also known as sablefish (*Anoplopoma fimbria*);

Müsoo: Sockeye salmon (blueback salmon, red salmon) - *Oncorhynchus nerka*

I learnt a lot in the process of matching the names in Dunn (1978) to scientific names. Thus, as described by Berlin (1992), some words are used to describe several species belonging to the same class. For example, there is only one word to describe sea

cucumbers even though 34 species of sea cucumbers occur in the waters from southern Alaska to southern British Columbia (Lambert 1997). Similarly, the Tsimshian uses the same word for squid and octopus, and for both sea lion and walrus. For all intents and purposes, these species are perceived as being the same in terms of function and appearance.

On the other hand, the number of marine species for which there are names was quite high (see Watkinson 1999), at least relative to the total number of words in Dunn (1978), and to the number of taxa usually recognized by various cultures (Berlin 1992), confirming that the early Coast Tsimshian relied heavily on the sea for resources. Indeed, traditional foods fish such as herring and oolachen, shellfish and seaweed that are harvested locally and consumed in the household still contribute the bulk of people's diet (Inglis et al. 1990).

Fish Names in Other Languages

A similar procedure to that presented above was applied by Danko (1998) to the Saanich word list of Montler (1991). Moreover, a few names in Chinook, Lilloet, Okanagan and Shuswap were entered in FishBase, pending a thorough coverage of these languages. Note that FishBase presently includes over 100,000 common names, in over 200 languages, for the about 25, 000 fish species that occur in the world, including names in Aleutiiq (Preishot and Leer1998), Cree, Inuktitut, and other languages original to North America

Accessing the Names on the Internet

The search address of FishBase is www.fishbase.org/seach.cfm. Once you are there, you can then access the TEK linked with a fish species either by entering its common name or related word e.g. 'Xagu' or 'Gyu', which are in Haida), or the scientific name of the species in question (*Hippoglossus stenolepis*), the Halibut.

Alternatively (and we recommend this approach), you can scroll the page of 'Search FishBase' until you reach Info by Country/Island. Then select 'British Columb. Can', and click the radio button for 'Common names'. After a while, depending on the speed of your connection to the Internet, a list of common names of the fishes of B.C. will appear, ordered alphabetically by language. The first language will be Chinook, then English (there are lots of English names!), then Haida, etc. Simply select another 'Country/Island' for names in languages spoken outside of B.C.

Missing information, missing languages

Critical users will immediately notice that FishBase contains far less fish names than occur in the many languages of the First Nation of B.C., or even than have may be published in various dictionaries. This is because the FishBase team, based in the Philippines, is not mandated, nor equipped to deal with these local names. Moreover, we believe that these compilations are best done by members of First Nations interested in documenting and/or recovering that part of their heritage. Other approaches may work such as critically studying the relevant published sources (as did e.g. Danko 1998), but it is still recommended to interview speakers of the language in question (as did, e.g., Compton et al. 1994).

Critical users will also note that the Haida names in FishBase presents more information on TEK including fish utilization and cultural associations, than for most of the other languages. Let this stand as a challenge!Please contact Daniel Pauly (at the Fisheries Centre, UBC; d.pauly@fisheries.ubc.ca) if you are interested in enriching the coverage of TEK for B.C. fishes, or any other part of the world for that matter.

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[1] x is pronounced like a gutteral h

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