

## BC Food History: The Ooligan

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The first question we often ask a new acquaintance is, “Where are you from?” and after the usual geographic markers the conversation evolves to icons of everyday life and typically food. What makes your place unique? What food is indigenous to the area? As a descendent of “newcomers” who came to BC in the late 1800’s and settled in the Pacific Northwest, I often name salmon as a typical BC food. But when I think back to my childhood, the fish I miss most is the ooligan. It was the first fish of the spring. My mother pan-fried them whole and we savoured this delicious rich delicacy. Although we never consumed them in the record amount attributed to Robert Cunningham, who in the late 1800’s ran a trading post on the Skeena River and apparently downed eighty-one ooligans at a single seating on a dare (Schwarcz, 2011), we definitely feasted. It was a never to be forgotten treat. In this paper, I explore the significance of this small silver fish to the everyday life of the peoples of the west coast of British Columbia and mourn the decline and endangered status of this fishery.

### **Rich Fish of the Pacific**

In this paper I will use the term “ooligan” because that is the name by which I know them. But this little fish is also variously known as “oolichan”, “hooligan” and “eulachon”. It is nicknamed “candle fish” because when dried and stood upright and lit, it will burn like a candle and provide light. It is a member of the smelt family so is also referred to as a smelt.



[Image source: <http://en.wikipedia.org/wiki/Eulachon>]

The ooligan is bluish on its upper half with silvery white sides and belly. It has small dark spots on its back. The body is long and thin with a large mouth and skinny head. The average adult length is about 22 centimeters.

The scientific name for ooligan, *Thaleichthys pacificus*, comes from Greek *thaleia* meaning rich, referring to the high oil content found in these fish, *ichthys* meaning fish, and *pacificus* meaning of the Pacific Ocean. Thus the ooligan is the “rich fish of the Pacific”. However they do not live exclusively in the Pacific Ocean. They are an anadromous species that lives part of its life in the ocean and part of its life in fresh water. They spend most of their life in the ocean, but like salmon, they return to freshwater streams and rivers to spawn and die. Unlike most salmon, however, the ooligan spawn in the spring and require river systems that have a spring freshet — a sudden rise in the river as a result of rapidly melting snow a glacial ice. Between February and May the adult ooligan leave the ocean and swim up streams and rivers to spawn. Usually the male fish start up the rivers first, followed by the females. Most spawning ooligan are three years old although they can live up to five years. As they struggle upstream, ooligan can be readily trapped or netted.

Ooligans range along the west coast of North America from the southern Bering Sea to northern California. Within BC, they have been documented spawning in over thirty rivers (see Fig. 1) but the major river systems where ooligan return to spawn are the Fraser, Skeena, Nass, and Klinaklini. Unfortunately all the runs have declined and some have all but disappeared (Armstrong & Hermans, n.d; Golds, 2014; Senkowsky, 2007). The ooligan is now listed as a threatened species by the US National Oceanic and Atmospheric Office of Protected Resources. In Canada the Fraser River population and Central Pacific Coast populations have been given endangered status and the Nass and Skeena are considered threatened (COSEWIC, 2011). The exact cause is not known, but over fishing, habitat degradation, and climate change are all possible factors. The consequences of this loss are far reaching.

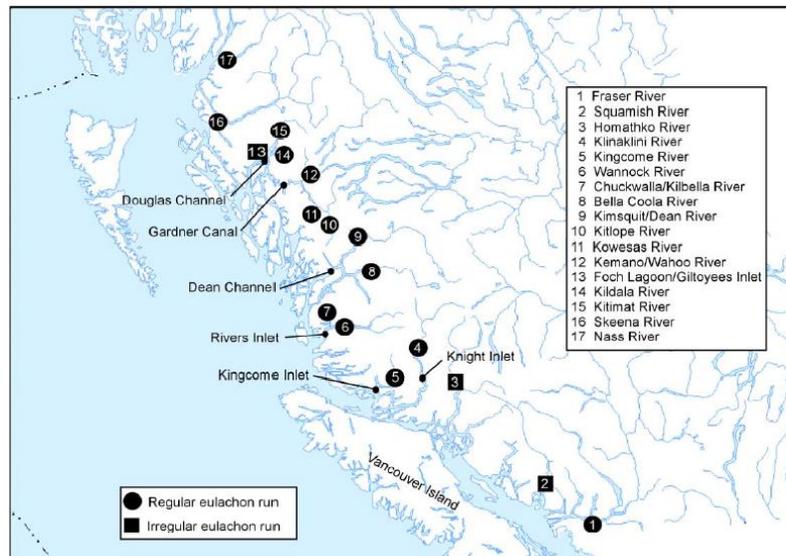


Figure 1. Major Spawning Rivers in British Columbia (Northwest Fisheries Science Center, 2008, p. 116)

## A Cultural Keystone Species

The ooligan have been described a cultural keystone species (CKS) (Senkowsky, 2007). According to Garaboldi and Turner (2004), CKS are culturally salient species that shape in a major way the cultural identity of a people. Their importance is reflected in the fundamental roles these species play in diet, materials, medicine, and/or spiritual practices. The symbolic value of CKS is essential to the stability and survival of a culture over time and the disappearance may “seriously jeopardize the transmission of knowledge and other vital processes that have allowed the community to thrive over time” (Cristantio & Vining, 2004, p. 162). Haggan (2010) claims that for “some Aboriginal people, eulachon are of greater cultural and spiritual importance than salmon” (p. 1). The decline of the ooligan population has placed it among the most endangered food traditions in North America (Nabhan, n.d.).

## Cultural Significance of the Ooligan

### Salvation Fish

For many North Coast First Nations, the ooligan was a “saviour” fish, representing the first fresh food source after the long winter (Haggen, 2010; Johnson, 2010). The return of the ooligan meant the beginning of spring and a renewed food supply, literally saving lives after a long cold winter when most of stored food supplies had been depleted.

According to Daly (2004):

In the Tsimshianic languages the arrival of the oolichan. . . was traditionally announced with the cry, ‘Hlaa aat’ixshi halimootxw!’ . . . or, ‘Our Saviour has just arrived!’ This bounty was conceived as a gift from nature to the people at a time of year when there were few other fresh food sources. Consequently, it was a prized gift in feasts and between neighbors. This was one of many gifts the people were permanently indebted for, and they could counter only by regarding the natural world with respect and gratitude (p. 113-114).

The ooligan were either baked or fried immediately or they were preserved by smoking or sun drying for consumption throughout the year. But the most well known processing of this fish was the rendering of their fat. It was this product, known as “grease”, that had greatest cultural, nutritional, social and economic value.

### **Ooligan Grease**

Ooligans are indeed a “rich fish”. Almost 20 percent of their weight is oil. The oil is rendered from their bodies creating a high-energy food source. The oil of ooligans is called “grease” because at cool temperatures, it is a solid with the color and consistency of butter. Nabhan (2006) describes the process of rendering the oil as a “vanishing fermented-oil food tradition” (p. 18). Once the fish are trapped or netted, they are placed in a pit, a cedar box or a canoe to allow for partial decomposition or “ripening” (Kuhnlien et al., 1982, p. 155). This is followed by hot water extraction where the fish is cooked in boiling water to release the fat. The fat rises to the top and can be skimmed off. There are variations in length of ripening, cooking process, skimming process, and type of storage all contributing to flavor differences. Certain aspects of processing that give

distinct qualities such as colour and flavor were considered proprietary. Rendered ooligan grease became a key item for trade with people who had no access to spawning rivers. It had outstanding keeping qualities and was an excellent source of food energy.

The preparation of grease is a cultural activity that involves whole families and communities and a tradition that contributes to the social cohesion and a collective sense of well-being. It's loss undermines cultural identity and the general health of the society.



Processing Oolichan Grease on Nass River, ca. 1880s<sup>1</sup>.

[BC Archives C-07432]

### Health Benefits of Ooligan Grease

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<sup>1</sup> For a more contemporary version of processing see *Making Grease* by Rupert Wilson documenting making grease at Kingcome Inlet in 2009.

<http://www.youtube.com/watch?v=6RRFVXs4f7I>; or Cranmer, B. (2008). *T'lina: the rendering of wealth*. National Film Board of Canada.

The health benefits of ooligan grease have been well documented (e.g., Kuhnlein, Chan, Thompson, & Nakai, 1982; Kuhnlein, Yeboah, Sedgemore, & Sedgemore, 1996; Phinney, Wortman, & Bibus, 2009). Ooligan grease consists of about 30% saturated fats and 55% mono-unsaturated fats making it more like olive oil than a typical fish oil. It is low in polyunsaturated fats which makes it more resistant to oxidation and spoilage making it easy to store which accounts in part for its desirability for trade. The nutritional contributions of ooligan grease are numerous. According to Kuhnlein, et al. (1982) ooligan grease is superior to lard, corn oil and margarine in providing fat soluble Vitamins A, E and K. It is a rich source of omega-3 fatty acids which help protect against diabetes and strokes (First Nations Health Council). Prior to contact, a high fat diet was common and in some areas ooligan fat made up a large portion of daily caloric intake as it was a common year-round condiment and often used to preserve food such as berries, but obesity and diabetes were rare. Ooligan grease has also been used as medicine to treat a variety of ailments from stomachaches and colds, to skin conditions and it has even been speculated that it prevents Seasonal Affective Disorder.

Unfortunately now, in addition to declining fish stocks, habitat contamination is a potential threat to health. First Nations are now faced with assessing the potential risk and benefits of traditional food sources. The risk being that “ooligans also contain PCBs and other organochlorines, and the further south in British Columbia the fish are harvested, the more contaminated they are” (Kuhnlein, 2003, p. 54-55). The benefits include such things as nutrition and health, taste, social, cultural, ecological, and economic value, and educating the next generation. Currently, the benefits of the food appear to outweigh the risks of small amounts of contaminants contained within them (Kuhnlein, 2003). However, when the food is not available the people often rely on store bought food rather than traditional country food to the detriment of their health.

### **Prestige Value of Ooligan Grease**

According to the People of Ksan (1980), “oolichan grease was truly the most valuable food on our grandmother’s grocery list – valuable from the standpoint of both prestige and health: caviar and cod-liver oil rolled into one” (p. 92). The trading of ooligan grease

provided huge wealth and power to the people of the North Coast (Hirsch, 2013). According to Kuhnlein et al. (1982),

The cultural significance of ooligan grease cannot be underestimated, as it was (and continues to be) a prominent food and gift during feasts and potlatch ceremonies. Early ethnographers among the Nuxalk and Kwakiutl people noted that it was a sign of poverty for a family to be without ooligan grease (p. 155)

The film, *T'lina: the rendering of wealth* (Cranmer, 2008) is aptly titled as it demonstrates that for the Kwakwaka'wakw the greatest honour is to have enough grease to give away at feasts and potlatches.

### **Grease Trails**

Wealth was also generated through trade. Ooligan grease was widely valued and sought not only by the aboriginal coastal peoples who harvested it locally, but among tribal groups far into the interior. Trails originating in the traditional ooligan fisheries rivers on coastal British Columbia covered a huge geographic area, from Alaska and the Yukon to Northern California and as far east as Montana and central Canada (Le Dressay, Lavallee & Reeves, 2013). Since the primary trade good was the rendered ooligan oil, they were known as the "grease trails".

For thousands of years, First Nations traders followed well-trodden "grease trails," usually the easiest routes across plateaus, highlands and over challenging mountains far into the western interior, back-packing heavy boxes of valuable Oolichan grease, held in place by cedar rope "tump-lines," attached to headbands (Hirsch, 2013, p. 3-4).

There were at least twenty-three major trails in British Columbia (Haggen, 2011). Trade in ooligan grease created a rich, vibrant economy of goods exchange but equally important was the connection established between and among coastal and interior communities. This network served for the transfer of information, news and social announcements such as future feasts and celebrations.

...the lure of grease was like the lure of gold, and every year most of our people trekked off loaded with all the surplus meat or fur they could muster to exchange for the prestigious grease and to enjoy the reunions and trade opportunities (People of Ksan, 1980, p. 89).

The historical significance of these trails is often overlooked. Grease trails were important in the development of *Chinook*, a trade language derived from Northwest Coast languages, English and French (Haggen, 2011). They opened the country to those who followed. In 1793, when Alexander Mackenzie made his famous overland journey to the Pacific Ocean, he followed the Nuxalk-Carrier Grease Trail from the Upper Fraser to the Bella Coola (Turler, 2007). The grease trails became fur brigade trails. Then they were used by miners in search of gold. Eventually many of the trails were turned into railroads and roads (Hirsch, 2013).

#### Summary

When fish and shellfish populations are depleted or brought to the brink of extinction, this biological loss generates culinary and other cultural consequences that may be too deep to immediately fathom. The loss of marine biodiversity affects all of us, but especially the coastal peoples of North America—both native and immigrant—who have built their bodies, minds and communities from the flesh of fish, a fact their salty stories, songs and sacred ceremonies celebrate (Nabhan, n.d., p. 1 ).

“Food is not just what we eat. It is an expression of who we are, how we live and the world we inhabit” (Kurlansky, 2007, p. 43). What we eat plays a large part in defining our relationships with others. It has been over 50 years since I last tasted an ooligan. In some aboriginal communities it has been 2 or 3 generations since they feasted on ooligans and rendered grease. When we lose part of “who we are, how we live, and the world we inhabit” we lose part of our social system, our connection to the places we call home, our traditional values, our sense of identity, our history. Often these are “invisible losses” that are not generally recognized or seen as important (Turner, Gregory, Brooks, Failing, & Satterfield, 2008).

In June 2007, the Nuxalk hosted a gathering of “mourning and shame” (Senkowsky, 2007, p. 720) where indigenous communities and fishery biologists contemplated the passing of the ooligan and the general indifference toward the loss and discussed how it might be restored in the future. A step toward restoring this food tradition unique to the coast of British Columbia.

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