



# Freshwater Mold *Saprolegnia* on Anaakliq, or Broad Whitefish, near Nuiqsut, Alaska

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## Saprolegnia Outbreak Timeline

### Fall-Winter 2013:

- October 2013, fishermen began to see “sick” Anaakliq, with severe cottony, white lesions (see photos below).
- Fishermen were interviewed. Samples were collected and sent to the ADF&G Fish Pathology Lab who determined the infection was caused by *Saprolegnia parasitica*, a freshwater mold, common worldwide.

### Fall 2014–2015

- More infected fish were caught. ABR observed ~15 sick fish.

### Summer 2016

- UAF student observed infected Anaakliq.

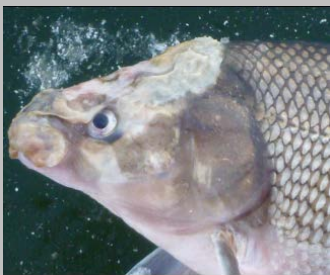
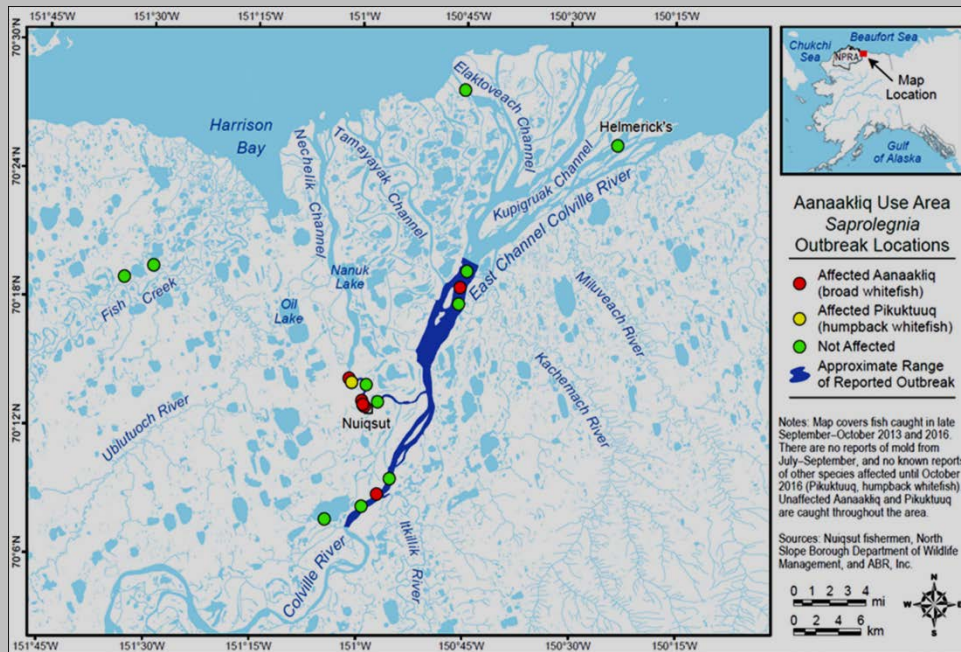
### Fall 2016

- 20–30 infected Anaakliq observed during under-ice fishing. Second species infected. Two Pikuktuuq, humpback whitefish caught downstream of Nuiqsut.

## Subsistence Fishing in Nuiqsut

- Fish represent nearly one-third of the annual subsistence diet of local residents.
- Fishing for Anaakliq takes place every month of the year; highest catches occur during June-October when fish move upstream to spawn. Anaakliq are large, abundant, and taste good!

## Saprolegnia Affected Area 2013–Present



**Right:** Jonah Nukapigak and Billy Adams collecting water and fish samples on Nigliq Channel in 2013.

**Left and Below:** Affected Aanaakliq, showing the “cottony-white” lesions caused by *Saprolegnia*.



## Continuing Work

Subsistence fish are important for Nuiqsut. Nuiqsut, the NSB-DWM, and other stakeholders (including industry) are interested in determining the causes of saprolegniosis.

The NSB-DWM’s continues studies to:

- Better understand saprolegniosis on these fish.
- Conduct necropsies to determine health status of normal and diseased fish.
- Investigate possible factors (contaminants, habitat alteration, climate change) that may contribute to the disease.

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