



## **Photobacterium in Alaska Fish Frequently Asked Questions**

Authorities with the State departments of Fish and Game, Environmental Conservation, and Health and Social Services occasionally receive reports from the public of fish caught in Alaska that have a strange glow.

### **What causes the fish to glow?**

The glowing substance on some fish is a type of bacteria known as *Photobacterium phosphoreum*. This glowing bacteria is common in cold marine waters and found around many coastal Alaska communities.

### **Which fish are affected by these bacteria?**

Salmon, burbot and other fish can be affected by these bacteria. The bacteria forms in the digestive tract (gut) and on the slippery layer (slime) of fish skin. This cold water bacteria can also be found in plankton and can cause the water to glow.

### **Could radiation cause the glowing?**

No. A common myth is that radioactive material glows. However, organic material affected by radiation, including fish, does not glow.

There is some concern about the effects of radiation from Japan's Fukushima Nuclear Reactor that was damaged by a tsunami in 2011. Alaska's monitoring stations have not found any levels of radiation above normal as a result of this incident.

### **Could oil contamination cause the glowing?**

No. *Photobacterium phosphoreum* is a naturally occurring type of bacteria and is not the result of any type of petroleum or heavy metal contaminant.

### **Is the fish safe to eat?**

Yes, but **only** if it is thoroughly cooked. According to the U.S. Food and Drug Administration, most fish and other seafood should be cooked to an internal temperature of 145° F (~63°C) to kill bacteria and other micro-organisms that may be present in raw fish. Eating any raw or undercooked fish could make you sick.

Some people — including pregnant women, young children, older adults, and those who have weakened immune systems or decreased stomach acidity — are at greater risk for food borne illness from bacteria and other micro-organisms, and should not eat raw or undercooked fish.



## **A reminder about PSP**

Alaska shellfish are susceptible to paralytic shellfish poisoning (PSP). PSP can very quickly cause paralysis or even death. PSP cannot be cooked out, cleaned out or frozen out. There is no way to know whether recreationally harvested shellfish — including clams, mussels, oysters, geoduck and scallops — contain the toxin that causes paralytic shellfish poison. Commercially harvested shellfish are routinely tested and considered safe.

## **For more information:**

- Fish Facts & Consumption Guidelines :  
<http://www.epi.hss.state.ak.us/eh/fish/default.htm>
- Subsistence Food Safety – Assessing the Risks and Benefits:  
<http://www.epi.hss.state.ak.us/eh/subsistence.htm>
- Paralytic Shellfish Poisoning Fact Sheet:  
<http://www.epi.alaska.gov/id/dod/psp/ParalyticShellfishPoisoningFactSheet.pdf>
- DEC Fish Monitoring Program: <http://www.dec.alaska.gov/eh/vet/fish.htm>
- DEC Radiation and Seafood: [http://dec.alaska.gov/eh/fss/Food/radiation\\_news.htm](http://dec.alaska.gov/eh/fss/Food/radiation_news.htm)

## **Contacts:**

- Department of Health and Social Services  
Environmental Health Program  
Ali Hamade, Program Manager, (907) 269-8000, [ali.hamade@alaska.gov](mailto:ali.hamade@alaska.gov)
- Department of Fish & Game  
Theodore Meyers, Principal Fish Pathologist/Fisheries Scientist, (907) 465-3577,  
[ted.meyers@alaska.gov](mailto:ted.meyers@alaska.gov)
- Department of Environmental Conservation  
Fish Monitoring and Environmental Health Information  
Bob Gerlach, State Veterinarian, (907) 375-8214, [bob.gerlach@alaska.gov](mailto:bob.gerlach@alaska.gov)

Updated Feb. 22, 2013