

## Ancient Carbon, Modern Food Glacier Melt Adds Ancient Edibles to Marine Buffet

Glaciers along the Gulf of Alaska are enriching stream and near shore marine ecosystems from a surprising source – ancient carbon contained in glacial runoff, researchers from four universities and the U.S. Forest Service report in the December 24, 2009 issue of the journal *Nature*, the international weekly journal of science. The study, led by UAS Environmental Science and Geography faculty Eran Hood, highlights previously unrecognized impacts from melting glaciers and provides a new understanding of how glacial runoff can contribute to the ocean food web.

Several media outlets picked up the story, including United Press International, Associated Press, Terra Daily (on-line) and the Juneau Empire.

Other authors of the article, “Glaciers as a source of ancient and labile organic matter to the marine environment,” are University of Alaska Fairbanks Ph.D. student Jason Fellman; Robert G.M. Spencer and Peter J. Hernes of the Department of Land, Air and Water Resources at the University of California Davis; Rick Edwards and David D’Amore of the Pacific Northwest Research Station of the U.S.D.A. Forest Service in Juneau, and Durelle Scott of Virginia Tech.

***“We found that the more glacier there is in the watershed, the more carbon is bioavailable to marine microorganisms. And the higher the percentage of glacier coverage, the older the organic material is — up to 4,000 years old,”***

The research is supported by a three-year grant from National Science Foundation to study the impact of Alaska’s melting glaciers on the transport and fate of nutrients in coastal watersheds in the Gulf of Alaska.

Hood and team found that organic carbon released from coastal glaciers is surprisingly valuable as a source of food to coastal food webs despite being thousands of years old. The release of significant amounts of high quality organic carbon to the coastal ocean may be important in supporting ecological productivity and influencing the chemistry along the Alaskan coastline.

Hood and coauthors hypothesize that forests that lived along the Gulf of Alaska between 2,500 to 7,000 years ago have been covered by glaciers, and this organic matter is now coming out. “The organic matter in heavily glaciated watersheds is labile, like sugar. Microorganisms appear to be metabolizing ancient carbon, and as they die and decompose,



biodegradable dissolved organic carbon is being flushed out with the glacier melt,” said Scott.

“Our findings suggest that runoff from glaciers may be a quantitatively important source of bioavailable organic carbon for coastal ecosystems in the Gulf of Alaska. Thus, future changes in glacier extent may impact the food webs in this region that support some of the most productive fisheries in the United States,” said Hood.

An abstract of the article is at this link: [www.nature.com/nature/journal/v462/n7276/full/nature08580.html](http://www.nature.com/nature/journal/v462/n7276/full/nature08580.html)

## Thomas Appointed Fellow at Foley Institute

Political Science faculty Clive Thomas has been appointed as the first Senior Fellow at the Thomas S. Foley Institute for Public Policy & Public Service at Washington State University in Pullman, Washington. Thomas will conduct research and share knowledge with WSU colleagues and students. An article in the institute’s newsletter calls Thomas, “one of the world’s leading scholars on interest groups. He has published extensively in the areas of interest groups, as well as Western, Alaska, Latin American, and comparative politics.”

Named to honor Tom Foley’s more than 30 years of public service to both state and nation and as the 49th Speaker of the House of Representatives, the Foley Institute fosters civic education, public service, and public policy research in a nonpartisan, cross-disciplinary setting. It has a threefold mission at WSU that covers public affairs programming and education, public policy research and Congressional studies, and student involvement in public policy and public service.

## Mulle Chapter in Canadian Journal

A chapter by sociology faculty Ginny Mulle is included in the journal, *Gender, Culture and Northern Fisheries*, recently published by the Canadian Circumpolar Institute Press. The title of the chapter is "Without Fish We Would No Longer Exist: The Changing Role of Women in Southeast Alaska's Subsistence Salmon Harvest."

## Sitka Staff Member Appointed to American Health Information Management Association



Leslie Gordon, MS, RHIA, Sitka Campus Health Information Management (HIM) Program Director has been appointed to the American Health Information Management Association (AHIMA) Education Strategy Committee (ESC) for a two year term. The ESC advising the AHIMA Board of Directors on issues that impact the HIM profession from an educational standpoint. This is a vital time for HIM education in the United States, with the national directive to implement Electronic Health Records by 2013 for all providers and the update to the current diagnosis coding system.

## A Field Trip to Snettisham

The Engineering Practices I (ENGR 151) class took a field trip to the Snettisham Hydroelectric power plant in December. Scott Willis, AEL&P's Power Generation Manager, gave a guest lecture during the semester describing the construction and operational history of the plant. His talk included a discussion of the recent avalanches and the engineering behind an avalanche control structure that now protects the tower most exposed to avalanche hazards. The students and faculty then flew by floatplane to the plant and toured the facility. Thanks to AEL&P for their support of the UAS Pre-Engineering program!



## sound+motion

UAS ARTS AT EGAN SERIES 2010

The University of Alaska Southeast announces a series of arts related events for Spring 2010. All Lectures are FREE and take place on periodic Fridays at 7:00 PM in the Egan Lecture Hall on the UAS Auke Lake Campus.

**Friday, January 22**

### Who's Afraid of New Music?

*Kyle Pickett, Music Director, Juneau Symphony*

Kyle Pickett will talk about the challenges and rewards of performing new music. He will also discuss how symphonic music evolved through the 20th century. The presentation is inspired by the Juneau Symphony's Alaska premiere of a new clarinet concerto by American composer, Lowell Lieberman.

**Friday, February 19**

### Warm Music on a Winter's Night

*Linda Rosenthal, violin & Sue Kazama, piano*

Beloved Favorites from the Romantic Period featuring Edvard Grieg's spirited Sonata in G Major, Massenet's celebrated "Meditation from Thais" and Smetana's From The Homeland, a work steeped in the folk music of Bohemia, the composer's native land.

**Friday, March 12**

### Treasures from the State Film Archives

*Alaska State Library Historical Collections Staff*

A series of short films including Ted Kennedy's 1968 speech to the Democratic convention in Sitka, Douglas Bridge opening, Tongass totem carving and Alaska Airlines promotional films.

**Friday, March 26**

### Musings on Music

*Kyle Pickett, Music Director, Juneau Symphony*

Kyle Pickett will talk about several topics, such as early music performance practice and representations of composers and musicians in popular culture. He will then open the discussion to questions about music, the orchestra, conducting, etc.

*Contact:*

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