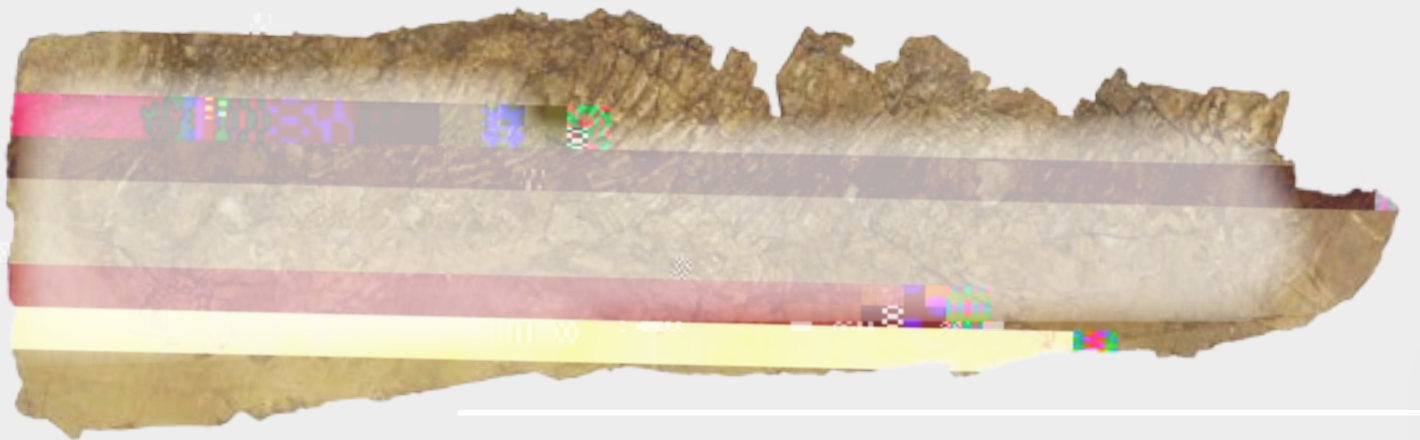


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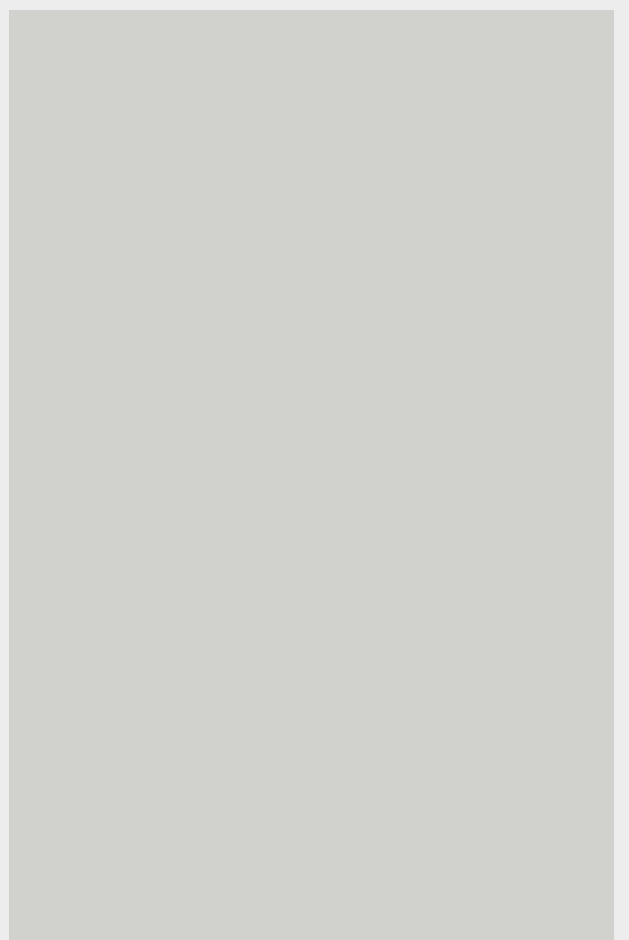




# NIH GRANTS EXPAND BIOMEDICINE IN ALASKA

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## The private life of moose

Fighting, mounting and rolling around in urine. It must be rutting season for Denali National Park's moose. Kris Hundertmark '02 takes his students to watch the fun each fall.



"I want to discuss the rutting behavior of moose, and they're so visible in the park," said the associate professor of wildlife biology.

Last fall, Hundertmark pointed to a bull moose rolling in a pit. He explained that the animal was spreading urine on its fur. The organic cologne may trigger ovulation in cow moose. Who knew?

## Have a cow

Associate Professor Lisa Lunn, a veterinarian, calls it "the birth of innovative teaching." The Veterinary Medicine Department







### "Cluck, cluck," said the dinosaur

Live relic dinosaurs roam Sarah Fowell's classes. The associate professor of geology uses chickens, direct descendants of dinosaurs, to help students learn how prehistoric tracks became fossils. With lettuce, the students lure the birds across clay, sand and other substrates. Students examine the foot impressions and discuss what they reveal. "I like students to simulate situations in the past and gain a hands-on understanding of how scientists learn about life long ago," Fowell said.

### Seeing tsunamis in Alaska

Seeing a tsunami usually requires being in the wrong place at the wrong time, but there is a right place and a right time to see it in Alaska, said Alexei Rybkin, mathematics professor. Each summer, Rybkin brings undergraduate students to Cook Inlet. They watch the tidal bore, a wave up to 7 feet high that sometimes stretches across an arm of the inlet. Rybkin predicts the onshore run-up of such waves through equations that students convert to algorithms, step-by-step procedures that can be applied to different places.

"We study how a tsunami wave enters shallow water, how far it propagates and what exactly a given tsunami wave is going to do," he said.

### Cocaine lab

According to recent research, 90 percent of U.S. currency bills carry traces of cocaine. Sarah Hayes, assistant professor of chemistry, has students in

her class test whether their dollar bills are among them.

Students put their bills in a solution to extract traces of cocaine (if there are any) and other substances. They place the



solution in a gas chromatography-mass spectrometry instrument, which has a coiled 75-foot column. The substances "run" through the column until like ones group together, Hayes said. When they cross the finish line, a detector identifies them, including the cocaine.

Such techniques are used in criminal forensics and explosive detection, but they're also a blast for students.

"I think science is fun and creative, and I wish students learned this earlier on," said Hayes. How early? "Like babies."

### Weather permitting

Rich Collins doesn't teach weather and climate in a windowless classroom. Actually, he doesn't even use a classroom. The professor of atmospheric sciences has his online students go outside and look at the sky. Students use a tool kit to measure the local weather. They share weekly, online weather reports through slide shows with their own voice-overs. The best weather systems involve students across the state, Collins said.

"If a weather system brings rain to the Aleutians, snow to the southern slopes of the Alaska Range and then a chinook to Fairbanks, we've hit a home run for the semester. Everybody gets to be part of that story," he said.

### In living color

Math and biology students teamed up in a class last spring to do some coloring, and it was definitely outside the usual lines.

The teams tinkered with the genome of the bacterium *E. coli*, inserting genes and regulatory elements to express the colors red, blue or yellow. Using data generated from the experiments, students created mathematical models to help them understand and uncover factors affecting gene expression.

Kristin O'Brien, associate professor of biology, and Elizabeth Allman, math professor, taught the Synthetic Biology class.

Allman said she enjoyed the class' trial and error. "You don't



A large, stylized green letter 'G' is positioned on the left side of a dark green rectangular background. The background is part of a larger, colorful, abstract pattern that covers the entire page. The pattern consists of various colors and textures, including halftone dots, solid colors, and irregular shapes.

rowing up in central Michigan, Greg van Houten didn't seem like the most likely candidate for a





*"THEY'RE MAKING THIS  
HUGE TRANSITION FROM  
THE MILITARY INTO  
THE CIVILIAN WORLD,  
AND THEN ON TOP OF  
THAT THEY'RE MAKING  
A BIG STEP INTO THE  
ACADEMIC WORLD."*







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MacLean's persistence in pulling together her knowledge and that of many others.

MacLean began her career at UAF as an Inupiaq instructor in 1972 and then moved up to associate professor, all the while working on the dictionary. But in 1987 she took a position in the Alaska Department of Education. Then she earned a doctorate in Inupiaq folklore from Stanford University. For the next decade, she served as president of Iñaliq College in Barrow.

She didn't return to the dictionary project until

2006, first under a university president's professorship created specifically to allow her to finish the work and then as an independent consultant on a federal grant.

To complete the dictionary, she put in 12-hour days until finishing the project in 2014.

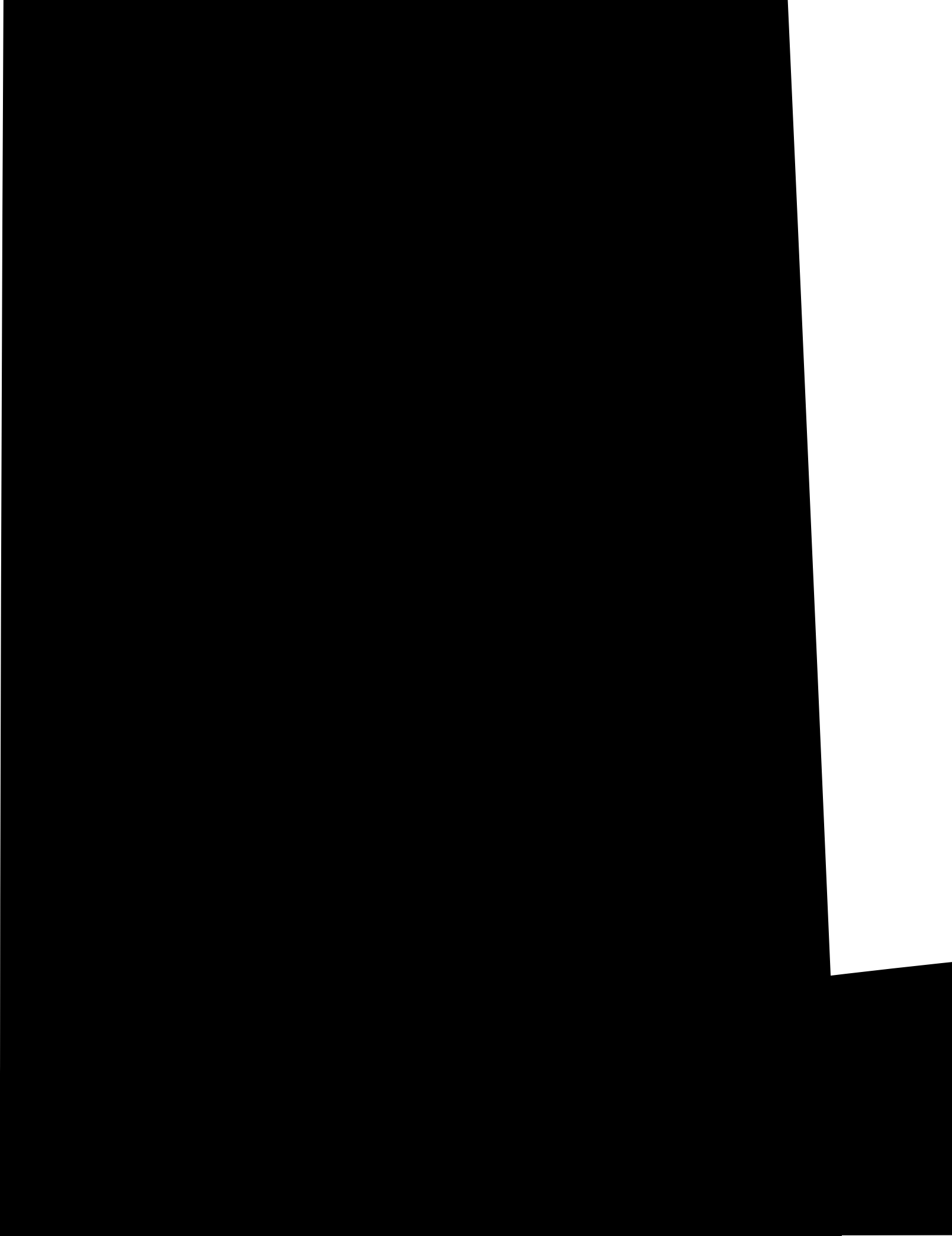
In the final few years, MacLean worked on the second floor of the Anchorage house that she and her husband, Steve, bought in 2011. (He retired in 1997 from a career as a UAF biology professor.)

"I drove him crazy," she said with a laugh.

The third floor, besides having a nice view of the trees along a creek, offered plenty of square footage for documents.

"I just took up all that space," she said.









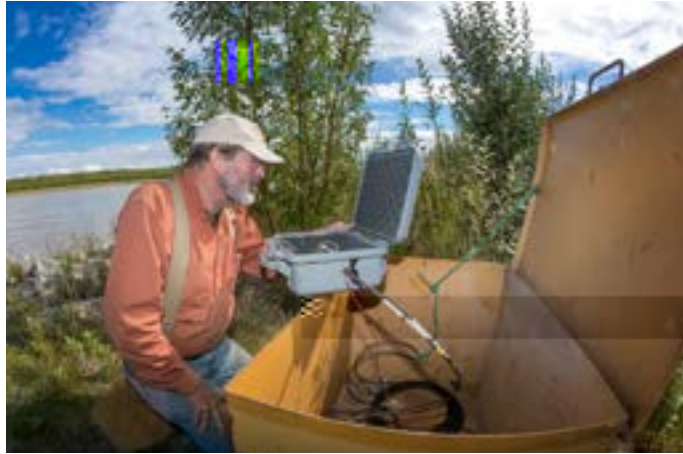




An aerial photograph of a wide river with a large sandbar in the center. The river flows from the top left towards the bottom right. In the background, there are rolling mountains under a blue sky with light clouds. The foreground shows a residential area with houses and trees.

# rent

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forced station to spend the 2013 summer season repairing the debris diverter.

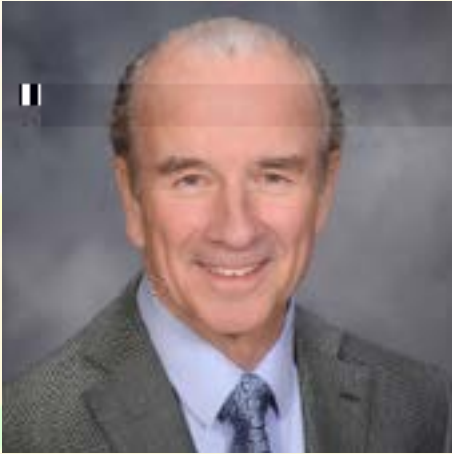
By September 2014 the diverter was ready, and Oceana wanted to test their turbine in Alaska's waters in the Tanana River near the small city of Nenana. ATCO trailer units, purchased from and set up by a local contractor, served as bases; a small generator hummed continuously in the background. A Nenana-based barge service had maneuvered the test barge into place several hundred feet offshore. Some half-dozen men, dressed warmly against the chill river wind and with life jackets,





## 1960s

George Gordon '62 and Linda Gordon '65 established the George E. Gordon and Linda C. Dahl Gordon Rie Team Endowment at UAF to provide scholarships for qualified rie team students. George, who passed away recently, received an Alumni Achievement Award for Business and Professional Excellence in 2009.



Andy Warwick '66 was named the School of Management's 39th business leader of the year. Warwick began working as a certified public accountant in 1978. He and Rick Schikora formed the accounting firm Warwick and Schikora in Fairbanks shortly thereafter. Andy will be honored at a dinner in Fairbanks on April 17.

Gail McIver Phillips '67 — "My husband, Walter Phillips '65, '68, and I, along with several other friends who were all involved in the beginning of the Iditarod, have published an anthologies a-19.e bo-22.t(1)]TJ02 -1.167DTd[(h)3.4(1)20.w(f t)-34.5(h)0.5(4(r)-15.3 a)-6.9(c)-13.1(3(g)2.1 o)1.5.1(i)-16.5(t)-18.8(a)-20

2000s







Da-ka-xeen Mehner '07, UAF assistant professor of Native arts, was named a 2015 Eiteljorg Contemporary Art Fellow by

**KEEP IN TOUCH**

Send suggestions at [www.uaf.edu/alumni/classnotes/](http://www.uaf.edu/alumni/classnotes/) or email [aurora.magazine@alaska.edu](mailto:aurora.magazine@alaska.edu).







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