



**Local Environmental Observer (LEO) Network** – View over a dozen new LEO Network observations posted on our June map about volcano eruptions in Sand Point and King Cove, herring roe in Toksook Bay; permafrost thaw in Chuathbaluk; and insects in Chalkyitsik and Palmer; sand lance in Atka, cod fish in Tununak; seals and sea ice in Wales, and willows in Evansville. [ANTHC](#) Visit our map [archive](#) and follow us on [Facebook](#).

**Climate Events in the Circumpolar North** - View our June map to see news reports from across the circumpolar north. In Alaska a swarm of earthquakes in the Northwest Arctic; Iceland worries about declining lobster stocks; and in Sweden an early start to the mushroom hunting season, in Canada floods in the West, fires in the North and in the East the first tufted puffin since the 1830s. [ANTHC](#). See our map archive [here](#).

**Moth invasions cause widespread damage in sub-arctic birch forests** June 24, 2014. From 2002 to 2009 roughly 10,000 km<sup>2</sup> of the mountain-birch forest across Northern Norway, Sweden and Finland was severely damaged by moth outbreaks. The autumnal moth (*Epirrita autumnata*) was joined about a century ago by the winter moth (*Operophtera brumata*), and both species have increased their ranges to include the coldest and most continental regions. Just in the past 15 years a third species, the umber moth (*Agriopis aurantiaria*), has invaded coastal North Norway. During the major outbreak of the 2000s, all three moth species attacked the mountain-birch forest. [Science Daily](#)

**Fires linked to large-scale Greenland ice melt.** June 24, 2014. *Kevin McGwin* - A combination of rising temperatures and ash from forest fires led to large-scale surface melting of the Greenland ice sheet in 1889 and 2012, according to recent research from Dartmouth College and published in the Proceedings of the National Academy of Sciences. "The widespread melting of the Greenland ice sheet required the combination of both of these effects - a lowered snow albedo from ash and unusually warm temperatures - to push the ice sheet over the threshold," said Kaitlin Keegan, a Dartmouth doctoral student who was the study's lead author. [Arctic Journal](#)

**The Arctic shipping boom - a bonanza for invasive exotic species June 27, 2014.** *Natasha Geiling* - As the Arctic warms and its ice melts, growing numbers of freight ships are reaping big savings from the 'Arctic short cut'. But this is creating a huge risk of invasive species spreading in ballast water and on hulls - disrupting both Arctic and temperate ecosystems. There aren't many invasive species from the Arctic that are known, but one that is, the [red king crab](#), has already wreaked havoc on [Norway's waters](#). A ferocious predator, the red king crab hasn't had much trouble asserting near total dominance over species unfamiliar with it. "You never know when the next red king crab is going to be in your ballast tank", says Whitman Miller. [The Ecologist](#)

**Video of the Week – Chasing the rays of the sun, measuring the sun's albedo** April 24, 2012. A group of researchers from Norway travelled to the summit of the Greenland Ice Sheet to make measurements of solar radiation and snow albedo. The project is called VAUJAV and the aim was to collect data to improve climate models and satellite observations. [YouTube](#)

The Climate and Health E-News is read by people who are interested in climate change and public health in the circumpolar north. For back issues at the Alaska Medical Library, click [here](#). To subscribe or unsubscribe, click [here](#).

Michael Brubaker, Director  
[Center for Climate and Health](#)  
Alaska Native Tribal Health Consortium  
907-729-2464

*Safe, Healthy, Sustainable Communities*