Tracing the origin of Arctic driftwood

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Tracking the origin of driftwood samples could help scientists to reconstruct past currents in the Arctic Ocean, a new study suggests. Arctic currents are likely to be affected by changing climate, but there are few observations that provide evidence on past current dynamics.

To evaluate the potential use of driftwood samples, Hellmann et al. analyzed 1445 driftwood remains collected in east Greenland and Svalbard, the largest compilation of Arctic driftwood samples so far compiled and analyzed. They were able to characterize four coniferous genera (Pinus, Larix, Picea, and Abies) and three deciduous genera (Populus, Salix, and Betula). At the species level, they distinguish two species of pine, which accounted for 40 percent of their samples. The pine originated mainly from western and central Siberia.

Larch and spruce samples, which represented 26 percent and 18 percent, respectively, could have originated from either Siberia or North America, the authors report. They note that in addition to helping to reconstruct past currents, analysis of driftwood samples can help scientists to evaluate past environmental conditions during the sample tree's life span.

More information: Tracing the origin of Arctic driftwood, *Journal of Geophysical Research-Biogeosciences*, doi: 10.1002/jgrg.20022, 2013 onlinelibrary.wiley.com/doi/10 … /jgrg.20022/abstract

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