Geophysical Research Abstracts, Vol. 9, 01519, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-01519


# Coralline alga reveals first marine record of subarctic North Pacific climate change

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Recent changes in the subarctic North Pacific - Bering Sea climate purportedly threaten the world's largest fisheries and endanger unique ecosystems. However, in the absence of reliable century-long oceanographic records, long-term climate dynamics and teleconnection patterns in this region are poorly understood. Thus, it remains unclear whether recent changes are unique or recurrent events. Here we present the first 117-year long annually resolved marine climate record from the western Bering Sea/Aleutian Island region using information contained in the calcitic skeleton of the long-lived crustose coralline red alga *Clathromorphum nereostratum*, a previously unused climate archive. The skeletal $\delta^{18}$O time series indicates a significant warming and/or freshening trend of surface waters after the middle of the 20th century. Furthermore, the time series is spatiotemporally correlated with Pacific Decadal Oscillation (PDO) and tropical El Niño-Southern Oscillation (ENSO) indices. Even though the western Bering Sea/Aleutian Island region is believed to be outside the area of significant marine response to ENSO, we propose that an ENSO signal is transmitted via the Alaskan Stream current system from the Eastern North Pacific, a region of known ENSO teleconnections. If maintained, the continued warming and freshening of the western Bering Sea/Aleutian Island region will augment observed climate and ecosystem changes in the Bering Sea and ultimately the Arctic Ocean.