Exploring the dendrochronological potential of native Hawaiian tree species for the study of long-term tropical Pacific climate dynamics

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Summary

Ohia (*Metrosideros polymorpha*) on the islands of Hawaii was recently noticed to develop clear annual growth rings. Research is proposed to collect samples of ohia, with the intent to explore its potential for dendrochronological studies. In light of the high rainfall variability in Hawaii and the likely sensitivity of Ohia to prolonged droughts, tree-ring chronologies from Hawaii will potentially provide important information about regional moisture change over the past few centuries. Such extended information will shed light on the understanding of long-term ENSO and PDO effects in this tropical Pacific region, given their strong influence on Hawaiian rainfall at inter-annual and inter-decadal time scales.