

Supplemental Material files for Ashworth, A.C., Thackray, G.D., and Gavin, D.G., 2020, Climate of the Last Glacial Maximum on the western Olympic Peninsula based on insect paleoecology, palynology, and glacial geology, *in* Waitt, R.B., Thackray, G.D., and Gillespie, A.R., eds., *Untangling the Quaternary Period: A Legacy of Stephen C. Porter*: Geological Society of America Special Paper 548, [https://doi.org/10.1130/2020.2548\(06\)](https://doi.org/10.1130/2020.2548(06)).

Supplemental Material Overview

S1. (A) Bacon age-depth model (Blaauw and Christen, 2011) for the Kalaloch site based on ages in Table S1B, and in Heusser (1972). (B) Radiocarbon and luminescence ages on which the Bacon age-depth model in S1A is based.

S2. Lists of skeletal elements of fossil insects identified for the South Fork Hoh River and Kalaloch sites: (A) SF Hoh River, (B) K1, (C) K2, (D) K3, (E) K4, and (F) K5. H—head(s), P—pronotum (a), LE—left elytron (a), RE—right elytron (a), Other—sternites, etc., MNI—minimum number of individuals.

S3. Selected images of identified fossil beetles from the South Fork Hoh River and Kalaloch sites.

S4. Photos of needle macrofossils recovered from Kalaloch. (A) Western hemlock (*Tsuga heterophylla*) from K1, lower (l) and upper (u) surfaces. (B) Sitka spruce (*Picea sitchensis*) from K3, lower and upper surfaces. (C) Western hemlock from K4.

S5. Modern collecting localities and associated mean July temperature (MJul) and mean January (MJan) data for *Olophrum boreale*. The climate data were derived from WorldClim (2019, Global Climate Data Version 2). The estimated modern climate averages for the Kalaloch fossil site are highlighted in red.

S6. Modern collecting localities and associated mean July temperature (MJul) and mean January (MJan) data for *Olophrum consimile*. The climate data were derived from WorldClim (2019, Global Climate Data Version 2). The estimated modern climate averages for the South Fork Hoh River fossil site are highlighted in red.