

**Survival of the strong, slow, and dense: Field evidence for rapid, transport-dependent bed material abrasion of heterogeneous source lithology**

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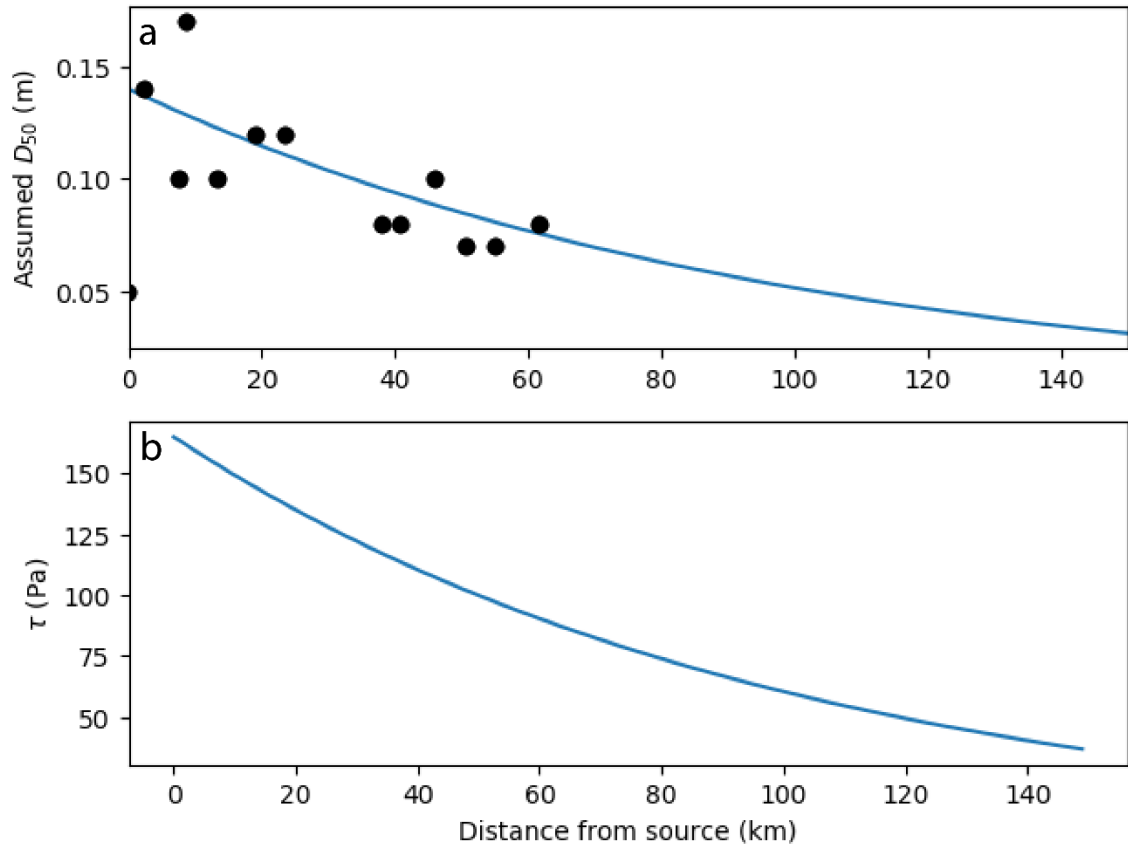
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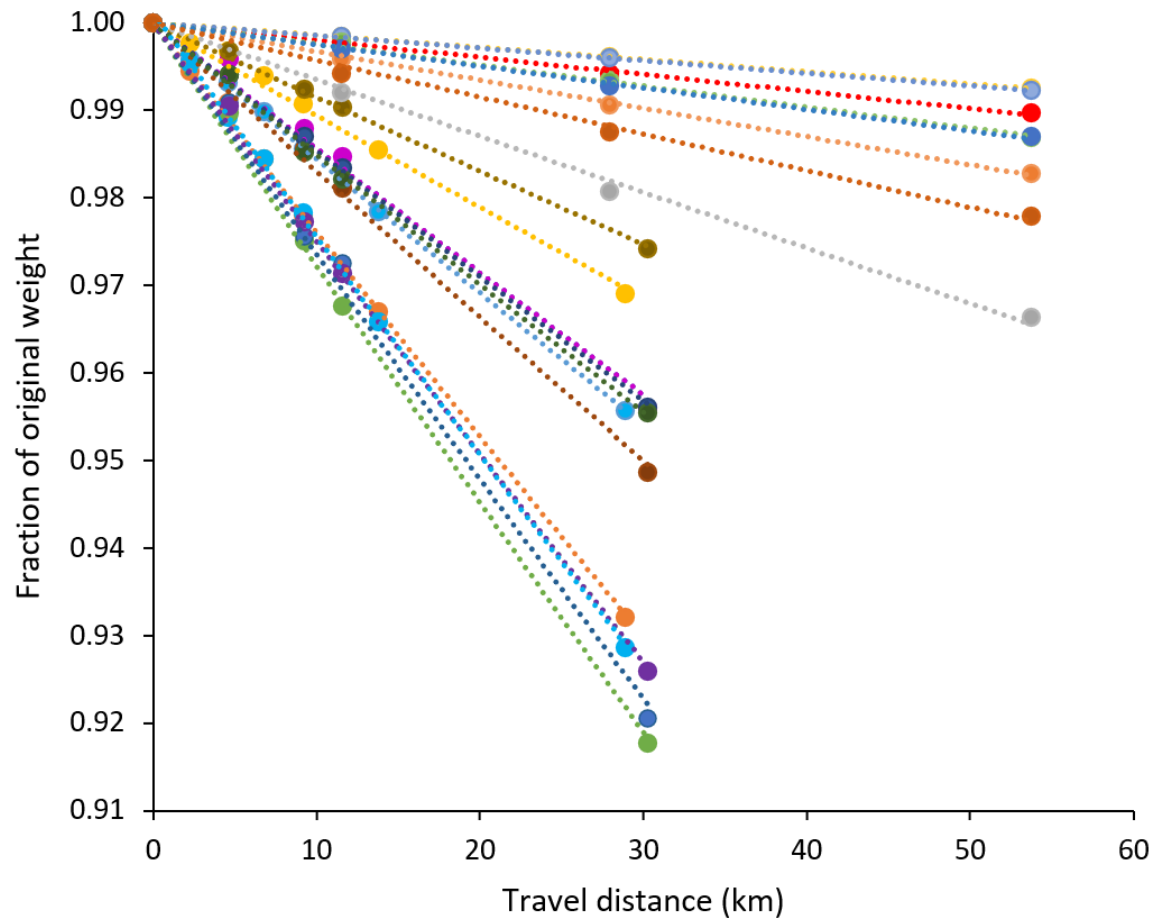
Figures S1 and S2

**Introduction**

This Supporting Information section includes figures to augment those presented in the main text. The methods used to produce these data are described in the main text.



**Figure S1.** Model channel conditions for transport-dependent bed material abrasion. a) Observed bar surface median grain size at sites along the Suiattle River (black dots) and the downstream fining relationship assumed for our transport-dependent abrasion model. b) Dimensional bed surface shear stress assumed in the model.



**Figure S2.** Mass loss of individual clasts during tumbler experiments, used to determine  $\alpha_t$  values in Figure 2a.