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Supporting Information for

Spatial variability in bedload transport rates determined by river pattern

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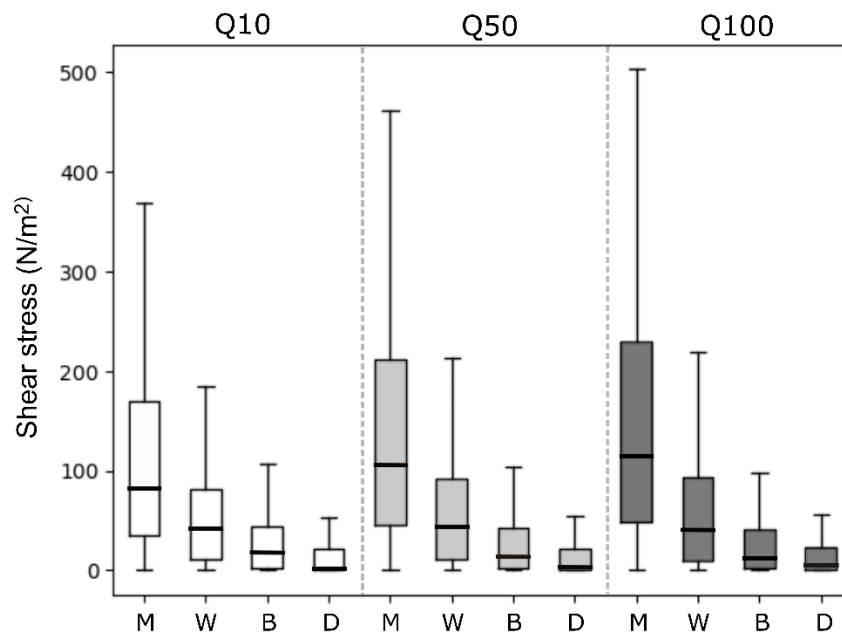
Figure S1. Shear stress for the four identified river patterns (meandering, wandering, braided, deltaic) along the Bislak River for different flow magnitudes (Q_{10}, Q_{50}, Q_{100}).
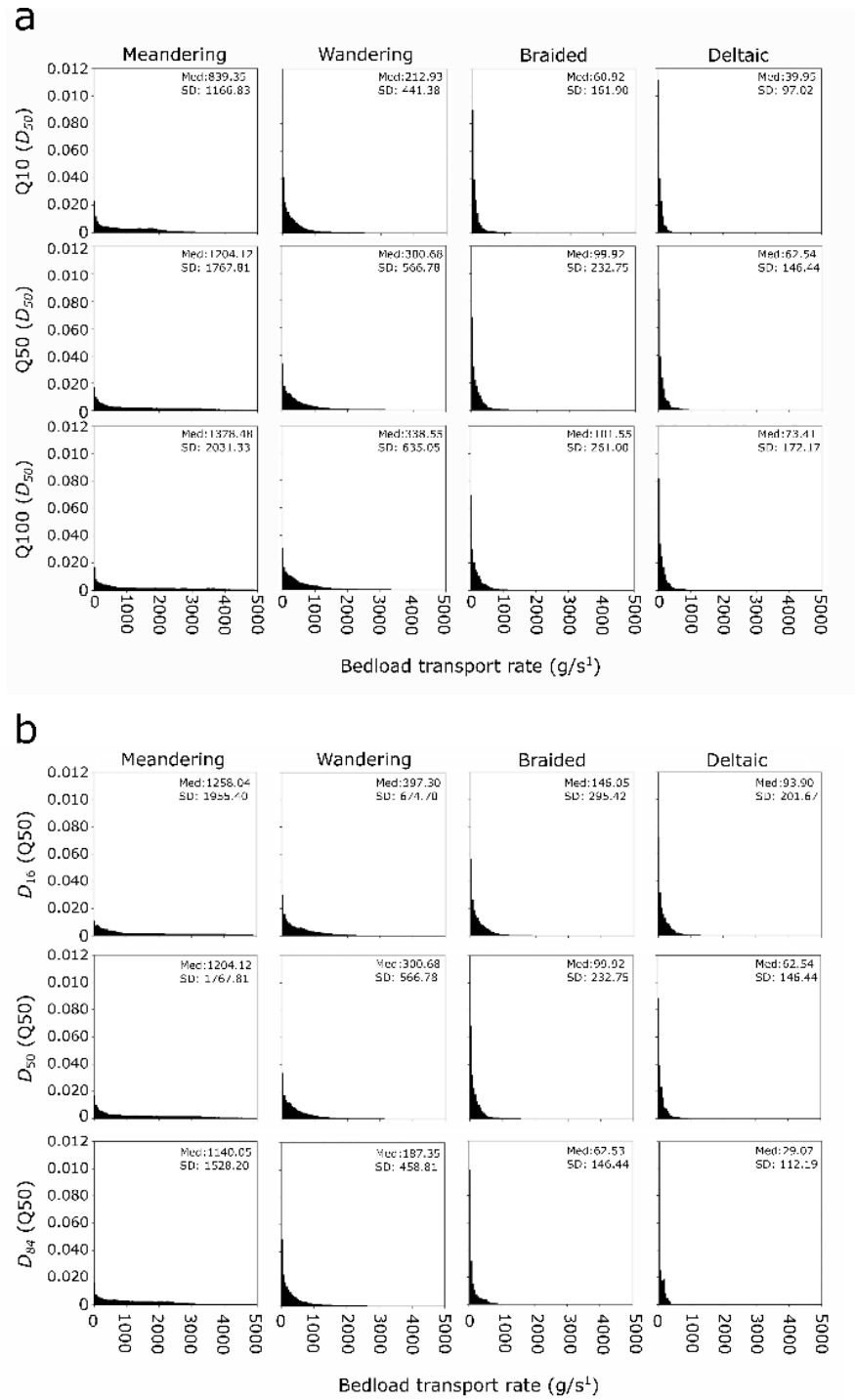
Figure S2. Probability density functions (PDFs) of bedload transport rate for the four identified river patterns (meandering, wandering, braided, deltaic) along the Bislak River using *k* = 1.5 (Eq 1). a. Bedload transport rates for each river pattern for

different low magnitudes (Q_{10}, Q_{50}, Q_{100}). b. Bedload transport rates for each river pattern for a single flow magnitude (Q50), with different grain sizes (D_{16}, D_{50} and D_{84}).

Bedload transport rate (g/s^1)

Bedload transport rate (g/s^1)
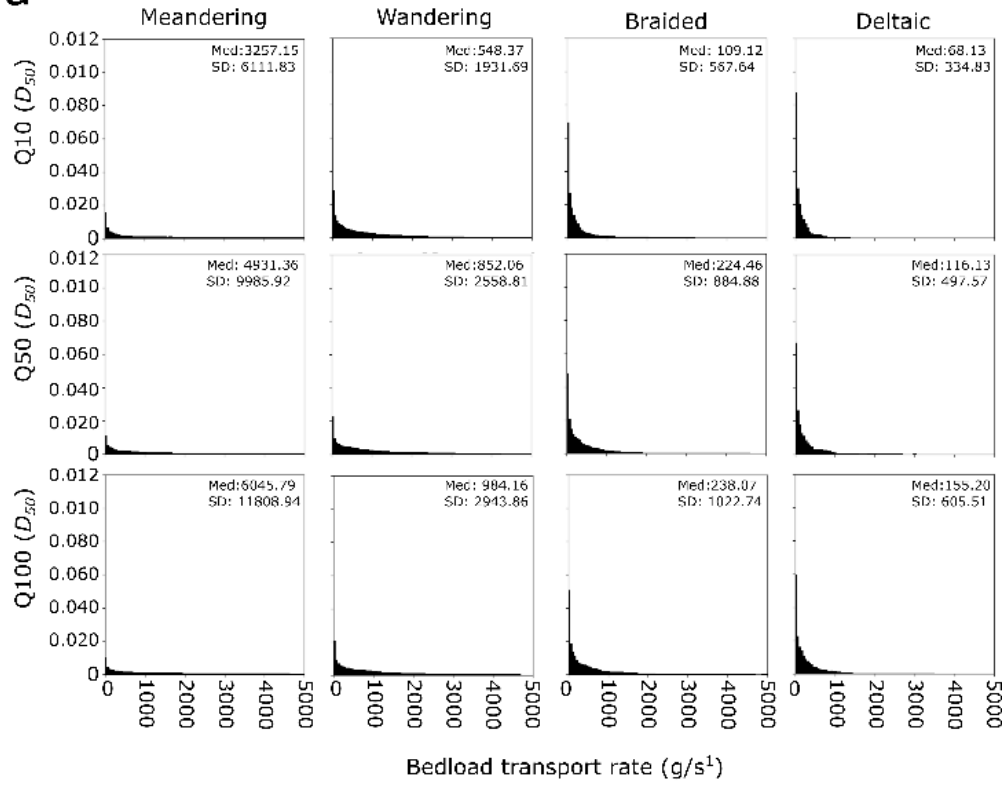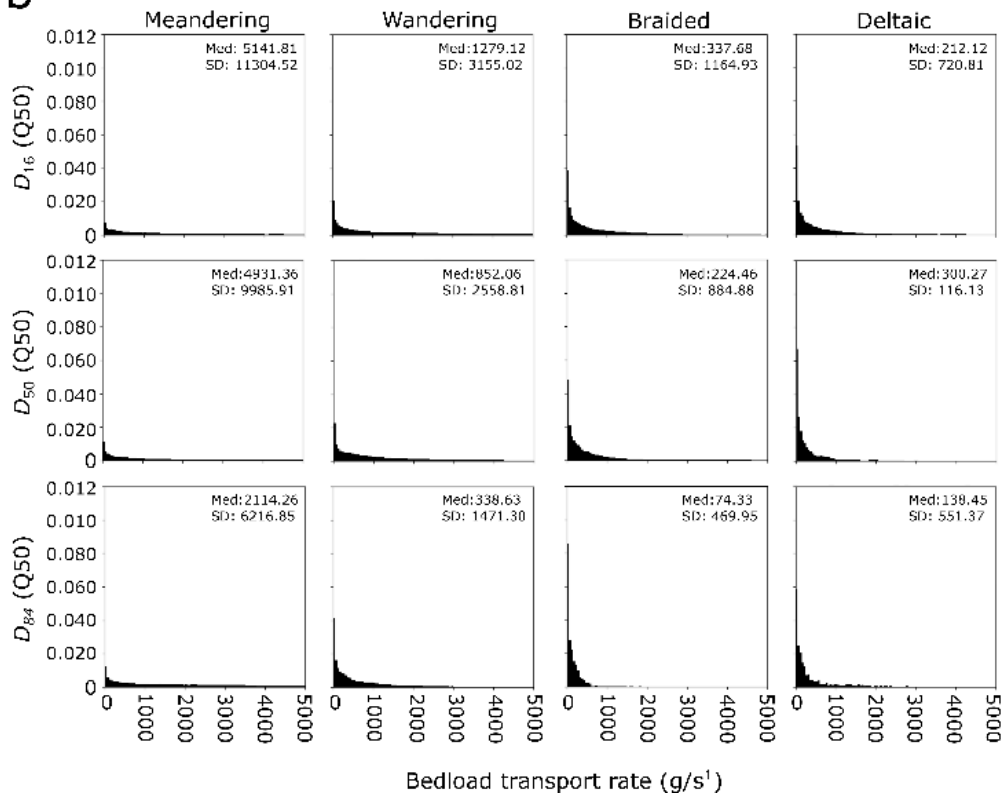
Figure S3. PDFs of bedload transport rate for the four identified river patterns (meandering, wandering, braided, deltaic) along the Bislak River using $k = 1.8$ (Eq 1). a. Bedload transport rates for each river pattern for different flow magnitudes (Q_{10}, Q_{50}, Q_{100}). b. Bedload transport rates for each river pattern for a single flow magnitude (Q_{50}), with different grain sizes (D_{16}, D_{50} and D_{84}).
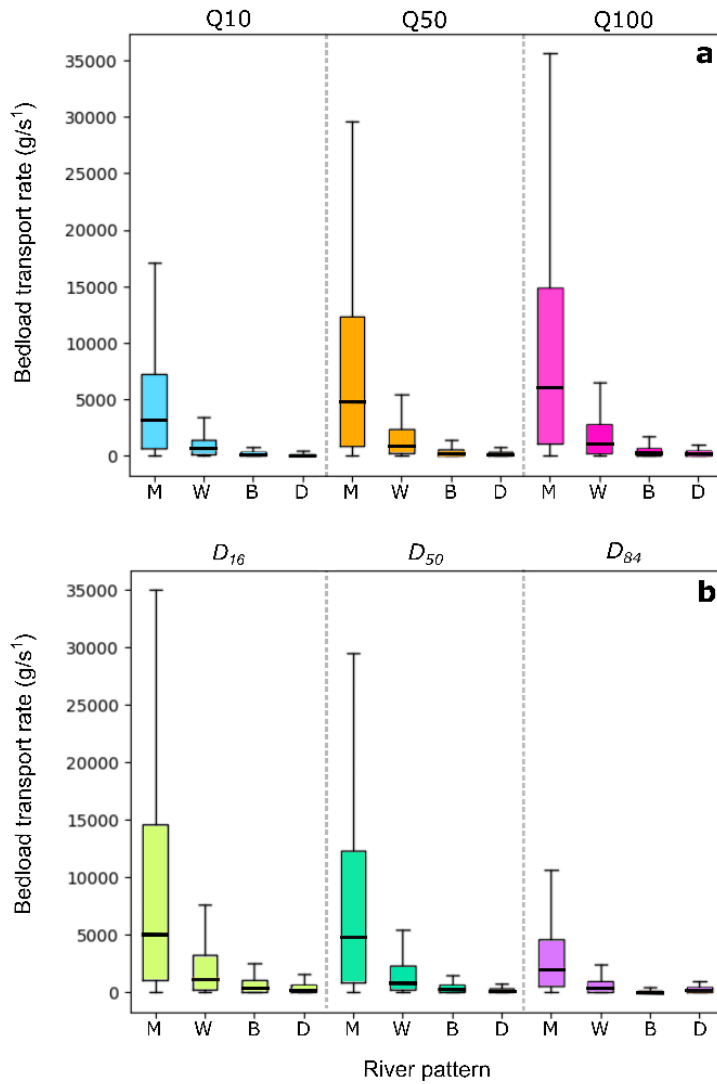
Figure S4. Fig 3. Bedload transport rates for the four identified river patterns (meandering, wandering, braided, deltaic) along the Bislak River using $k = 1.8$ (Eq 1). a. Bedload transport rates for each river pattern for different flow magnitudes (Q_{10}, Q_{50}, Q_{100}). b. Bedload transport rates for each river pattern for a single flow magnitude (Q_{50}), with different grain sizes (D_{16}, D_{50} and D_{84}).

Table S1. River pattern characterisation based on River Styles analysis reported in Tolentino et al. (2022).

Pattern	Valley setting	Valley width (m)	Channel Planform	Geomorphic units	Slope	River Styles description
Meandering	Confined (>85% of channel margin abuts valley bottom margin)	110–350	Single thread, moderate sinuosity	Instream units: rapids, pools, runs, boulder bars, benches, ledges. Floodplain units: terrace	0.0045	Confined, occasional floodplain pockets, gravel/boulder bed
Wandering	Partly confined (10–85% of either channel margin abuts valley bottom margin)	500–1450	Single - multi thread, low to moderate sinuosity	Instream units: pools, riffles, runs, benches, ledges Floodplain units: floodplain, terrace, flood channels, chute channels	0.0031	Partly confined, planform-controlled wandering, discontinuous floodplain, gravel/cobble bed
Braided	Laterally unconfined (< 10% of channel margin abuts valley bottom margin)	> 2000	Multiple threads, low sinuosity	Instream units: pools, riffles, runs, compound bank-attached bars, compound islands, benches, ledges Floodplain units: paleochannel, chute channels, flood channels	0.0023	Laterally unconfined, continuous channel, braided, gravel bed
Deltaic	Laterally unconfined (< 10% of either channel margin abuts valley bottom margin)	> 2000	Multiple threads, low sinuosity	Instream units: compound bank-attached bars, compound islands. Floodplain units: paleochannel, anabranches, flood channels and flood runners, backswamp, chute channel, levee	0.0016	Laterally unconfined, continuous channel, deltaic, gravel bed