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Supplement of

Bedload transport in a formerly glaciated mountain catchment constrained by particle tracking

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25

SUPPLEMENTARY MATERIAL

26

Table S1 - Summary of clast movements and travel distances (L) for each survey conducted in Upper Strimm.

27

Data are stratified by weight classes (W Class).

28

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	23	1	0	0	0	24	4%	96%	0.8
201 - 400	26	2	0	0	0	28	7%	93%	1.2
401 - 600	14	1	0	0	0	15	7%	93%	0.3
601 - 800	7	0	0	0	0	7	0%	100%	0.0
801 - 1000	2	1	0	0	0	3	33%	67%	0.4
1001 - 1500	3	0	0	0	0	3	0%	100%	0.0
Grand total	75	5	0	0	0	80	Survey: 28 September 2011		

29

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	25	10	0	0	0	35	29%	71%	1.7
201 - 400	42	20	0	0	0	62	32%	68%	4.5
401 - 600	31	6	0	0	0	37	16%	84%	0.7
601 - 800	9	4	0	0	0	13	31%	69%	1.1
801 - 1000	4	3	0	0	0	7	43%	57%	3.3
1001 - 1500	4	1	0	0	0	5	20%	80%	0.6
Grand total	75	5	0	0	0	80	Survey: 28 September 2011		

30

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	83	4	0	0	0	87	5%	95%	1.3
201 - 400	95	8	0	0	0	103	8%	92%	3.4
401 - 600	43	0	0	0	0	43	0%	100%	0.0
601 - 800	13	0	0	0	0	13	0%	100%	0.0
801 - 1000	7	0	0	0	0	7	0%	100%	0.0
1001 - 1500	6	0	0	0	0	6	0%	100%	0.0
Grand total	247	12	0	0	0	259	Survey: 3 July 2012		

31

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	69	16	0	0	0	85	19%	81%	0.8
201 - 400	87	16	0	0	0	103	16%	84%	3.9
401 - 600	35	8	0	0	0	43	19%	81%	2.6
601 - 800	11	1	0	0	0	12	8%	92%	0.4
801 - 1000	3	3	0	0	0	6	50%	50%	1.3
1001 - 1500	6	0	0	0	0	6	0%	100%	0.0
Grand total	211	44	0	0	0	255	Survey: 11 September 2012		

32

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	79	4	0	0	0	83	5%	95%	0.6
201 - 400	96	6	0	0	0	102	6%	94%	1.6
401 - 600	42	1	0	0	0	43	2%	98%	0.3
601 - 800	13	0	0	0	0	13	0%	100%	0.0
801 - 1000	6	0	0	0	0	6	0%	100%	0.0
1001 - 1500	6	0	0	0	0	6	0%	100%	0.0
Grand total	242	11	0	0	0	253	Survey: 4 October 2012		

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	43	34	1	1	0	79	46%	54%	35.0
201 - 400	43	48	4	0	0	95	55%	45%	16.0
401 - 600	24	17	2	0	0	43	44%	56%	17.3
601 - 800	5	7	1	0	0	13	62%	38%	11.2
801 - 1000	0	6	0	0	0	6	100%	0%	8.0

33

1001 - 1500	4	2	0	0	0	6	33%	67%	3.9
Grand total	119	114	8	1	0	242	Survey: 27 June 2013		

34

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	44	34	0	0	0	78	44%	56%	8.9
201 - 400	60	32	1	0	0	93	35%	65%	12.0
401 - 600	30	13	0	0	0	43	30%	70%	2.0
601 - 800	7	6	0	0	0	13	46%	54%	0.5
801 - 1000	3	3	0	0	0	6	50%	50%	1.0
1001 - 1500	4	2	0	0	0	6	33%	67%	0.5
Grand total	148	90	1	0	0	239	Survey: 1 October 2013		

35

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	43	30	1	0	0	74	42%	58%	14.0
201 - 400	50	39	3	0	0	92	46%	54%	23.9
401 - 600	30	13	0	0	0	43	30%	70%	4.0
601 - 800	10	3	0	0	0	13	23%	77%	9.2
801 - 1000	3	3	0	0	0	6	50%	50%	3.8
1001 - 1500	3	3	0	0	0	6	50%	50%	0.5
Grand total	139	91	4	0	0	234	Survey: 13 June 2014		

36

37 **Table S2 - Summary of clast movements and travel distances (L) for each survey conducted in Lower Strimm.**
 38 **Data are stratified by weight classes (W Class).**

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	19	0	0	0	0	19	0%	100%	0.0
201 - 400	28	3	2	1	0	34	18%	82%	33.9
401 - 600	25	5	1	0	0	31	19%	81%	13.6
601 - 800	24	0	0	0	0	24	0%	100%	0.0
801 - 1000	19	2	1	1	0	23	17%	83%	30.6
1001 - 1500	21	2	2	0	0	25	16%	84%	18.5
1501 - 3000	7	2	1	0	0	10	30%	70%	10.2
>5000	3	1	0	0	0	4	25%	75%	2.9
Grand total	146	15	7	2	0	170	Survey: 27 September 2011		

39

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	4	14	1	0	0	19	79%	21%	10.3
201 - 400	15	17	2	0	0	34	56%	44%	15.6
401 - 600	16	15	0	0	0	31	48%	52%	7.9
601 - 800	15	9	0	0	0	24	38%	63%	6.1
801 - 1000	14	7	2	0	0	23	39%	61%	17.2
1001 - 1500	15	9	1	0	0	25	40%	60%	10.3
1501 - 3000	6	3	1	0	0	10	40%	60%	10.0
>5000	1	3	0	0	0	4	75%	25%	9.5
Grand total	86	77	7	0	0	170	Survey: 18 May 2012		

40

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	5	4	2	0	8	19	74%	26%	848.5
201 - 400	6	7	4	1	16	34	82%	18%	936.8
401 - 600	3	7	1	0	20	31	90%	10%	841.6
601 - 800	2	7	3	0	12	24	92%	8%	609.1
801 - 1000	2	2	7	0	12	23	91%	9%	388.5
1001 - 1500	4	2	0	2	17	25	84%	16%	910.3
1501 - 3000	1	0	1	0	8	10	90%	10%	778.0
>5000	0	2	0	0	2	4	100%	0%	238.6
Grand total	23	31	18	3	95	170	Survey: 28 June 2012		

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W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	14	3	2	0	0	19	26%	74%	13.2
201 - 400	14	16	1	0	0	31	55%	45%	12.6
401 - 600	19	7	4	0	0	30	37%	63%	21.7
601 - 800	16	6	2	0	0	24	33%	67%	11.8
801 - 1000	18	5	0	0	0	23	22%	78%	8.3
1001 - 1500	11	13	0	0	0	24	54%	46%	8.4
1501 - 3000	8	2	0	0	0	10	20%	80%	4.9
>5000	3	1	0	0	0	4	25%	75%	1.7
Grand total	103	53	9	0	0	165	Survey: 21 August 2012		

42

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	14	5	0	0	0	19	26%	74%	5.9
201 - 400	19	11	0	0	0	30	37%	63%	8.5
401 - 600	22	8	0	0	0	30	27%	73%	3.4
601 - 800	15	8	1	0	0	24	38%	63%	14.5

801 - 1000	11	11	1	0	0	23	52%	48%	21.1
1001 - 1500	14	10	0	0	0	24	42%	58%	8.5
1501 - 3000	6	4	0	0	0	10	40%	60%	3.8
>5000	3	1	0	0	0	4	25%	75%	3.1
Grand total	104	58	2	0	0	164	Survey: 25 October 2012		

43

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	19	0	0	0	0	19	0%	100%	0.5
201 - 400	23	7	0	0	0	30	23%	77%	9.2
401 - 600	20	10	0	0	0	30	33%	67%	9.7
601 - 800	17	5	2	0	0	24	29%	71%	10.8
801 - 1000	13	10	0	0	0	23	43%	57%	2.8
1001 - 1500	17	7	0	0	0	24	29%	71%	5.6
1501 - 3000	7	3	0	0	0	10	30%	70%	1.4
>5000	4	0	0	0	0	4	0%	100%	0.3
Grand total	120	42	2	0	0	164	Survey: 21 May 2013		

44

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	0	0	0	0	19	19	100%	0%	859.5
201 - 400	0	3	0	0	27	30	100%	0%	906.4
401 - 600	3	0	0	0	27	30	90%	10%	926.9
601 - 800	1	0	0	0	23	24	96%	4%	919.1
801 - 1000	0	2	0	0	21	23	100%	0%	742.7
1001 - 1500	2	1	0	0	21	24	92%	8%	684.9
1501 - 3000	0	1	0	0	9	10	100%	0%	611.5
>5000	0	0	0	0	4	4	100%	0%	759.5
Grand total	6	7	0	0	151	164	Survey: 2 July 2013		

45

W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	5	2	0	0	3	10	50%	50%	959.3
201 - 400	12	11	3	0	1	27	56%	44%	918.1
401 - 600	9	12	2	0	1	24	63%	38%	296.5
601 - 800	4	12	2	0	0	18	78%	22%	24.3
801 - 1000	10	2	2	1	0	15	33%	67%	37.1
1001 - 1500	7	11	1	0	1	20	65%	35%	130.5
1501 - 3000	4	9	0	0	0	13	69%	31%	7.7
>5000	1	1	1	0	0	3	67%	33%	10.0
Grand total	52	60	11	1	6	130	Survey: 2 October 2013		

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W Class (g)	Immobile	0-10 m	11-30 m	31-50 m	>50 m	Total	Moved	Immobile	L Max
< 200	1	2	0	0	6	9	89%	11%	607.2
201 - 400	12	3	0	1	10	26	54%	46%	905.8
401 - 600	10	4	1	0	9	24	58%	42%	684.2
601 - 800	6	2	2	1	7	18	67%	33%	676.8
801 - 1000	5	0	1	1	8	15	67%	33%	958.3
1001 - 1500	6	3	0	1	9	19	68%	32%	377.2
1501 - 3000	4	0	0	1	8	13	69%	31%	953.4
>5000	1	0	0	0	2	3	67%	33%	500.9
Grand total	45	14	4	5	59	127	Survey: 16 July 2014		