Data Repository Table DR-1. Chemistry and particle-size data (USDA units) for soil pits and outcrops at Virginia Park, graben-fill, and Hamburger Rock sites.

Horizon or unit	Depth (cm)	Organic matter %	$CaCO_3$ %	Soluble salts %	Coarse sand 1000-500 um	Med. sand 500-250 um	Fine sand 250-100 um	V. fine sand 100-50 um	Coarse silt 50-20 um	Med. silt 20-10 um	Fine silt 10-5 um	V. fine silt 5-2 um	Coarse clay 2-1 um	Fine clay 1-0.5 um	V. fine clay <0.5 um
VP-1, dune crest soil pit in Virginia Park															
A	0-6	1.05	4.63	0.14	0	0.71	37.12	32.98	13.71	3.57	3.23	3.34	1.88	1.45	2.03
Bwk	6-19	0.01	6.21	0.11	0	1.41	33.16	27.84	12.74	4.60	4.92	6.17	3.56	2.41	3.20
B1tk	19-30	0.19	6.32	0.22	0	1.43	34.26	29.94	14.13	4.08	3.62	4.27	2.71	2.23	3.34
Bt2k	30-55	0.45	7.77	0.20	0	2.01	43.26	29.91	10.43	2.99	2.44	2.74	1.88	1.70	2.64
B31tkb	55-66	0.40	7.02	0.16	0	1.24	32.77	29.42	15.41	5.06	3.86	4.03	2.51	2.16	3.55
B32tkb	66-78	0.24	7.02	0.27	0	1.16	32.79	30.02	15.70	4.95	3.71	3.84	2.40	2.06	3.37
Bkb	78-90	n.d.	14.59												
VP-2, dune swale soil pit in Virginia Park															
Ak	0-5	0.62	5.86	0.13	0	1.32	32.62	30.86	16.51	4.77	4.04	4.09	2.12	1.51	2.16
Bw	5-14	0.25	7.19	0.15	0	1.51	31.01	27.55	14.46	5.00	5.09	6.49	3.65	2.29	2.96
Bwk	14-44	0.19	7.10	0.21	0	2.19	35.01	28.68	14.41	4.37	3.67	4.01	2.45	2.04	3.16
Btk1b	44-55	0.17	7.04	0.23	0	4.50	39.26	24.93	11.27	4.08	3.78	4.58	2.66	1.94	3.00
Btk2b	55-85	0.21	7.67	0.18	0	3.61	33.44	24.38	14.25	5.25	4.25	4.80	2.94	2.47	4.62
Bkb	98-115	n.d.	10.41	n.d.											
8U-13, arroyo cut in Virginia Park															
Dune sand	0-5	n.d.	3.73	n.d.	0	4.99	43.29	27.98	11.30	2.77	2.30	2.63	1.59	1.18	1.97
Alluvium	~35	n.d.	7.74	n.d.	0.23	22.62	51.96	14.30	3.92	1.75	1.47	1.92	1.33	0.50	0.00
Alluvium	45-65	n.d.	7.20	n.d.	1.20	28.51	50.89	10.57	2.02	1.24	1.12	1.51	0.90	0.67	1.37
Dune sand	~70	n.d.	1.34	n.d.	0	6.48	29.85	19.87	13.77	6.34	5.83	6.67	3.44	2.26	5.50
Dune sand	~90	n.d.	3.03	n.d.	0	11.12	37.58	24.64	14.69	4.30	2.96	2.74	1.48	0.51	0.00
Dune sand	~130	n.d.	9.19	n.d.	0	16.38	43.64	16.93	7.03	5.02	5.00	3.93	1.46	0.62	0.00
8U-14, arroyo cut in Virginia Park															
Alluvium	~15	n.d.	8.84	n.d.	0	12.58	52.85	21.21	4.48	1.54	1.42	1.87	1.27	0.98	1.80
Alluvium	~75	n.d.	7.29	n.d.	0	12.42	51.26	21.16	6.46	3.28	2.39	1.89	0.86	0.28	0.00
Dune sand	~60*	n.d.	7.95	n.d.	0	9.47	52.79	23.75	6.36	2.68	1.91	1.76	0.97	0.31	0.00
Dune sand	~135	n.d.	4.29	n.d.	0	18.86	60.52	12.30	2.14	2.18	1.64	1.43	0.69	0.24	0.00

* Inversion in depths due to irregular contact of overlying alluvium with dune sand.

9U-21, arroyo cut in graben fill along Chesler Wash															
A	0-5	n.d.	6.78	n.d.	0	3.07	37.37	28.38	12.06	5.04	4.80	4.26	1.91	1.22	1.89
Bwk	5-25	n.d.	8.6	n.d.	0	5.70	33.06	22.86	18.49	7.07	3.56	3.20	1.80	1.37	2.88
2Bt1kb1	25-70	n.d.	12.4	n.d.	0	11.29	40.95	21.56	12.92	4.34	2.34	2.30	1.33	1.00	1.97
2Bt2kb1	70-90	n.d.	11.93	n.d.	0	5.97	36.71	25.72	16.07	5.11	2.79	2.65	1.52	1.13	2.34
2Bt3kb1	90-115	n.d.	9.48	n.d.	0	7.21	44.13	24.43	10.19	3.50	2.70	3.01	1.72	1.18	1.92
2Bwk1b1	115-128	n.d.	13.44	n.d.	0	6.77	44.92	25.02	9.39	3.54	2.85	2.98	1.61	1.12	1.81
2Bwk2b1	128-148	n.d.	10.65	n.d.	0	7.25	43.28	24.39	9.69	3.76	3.31	3.60	1.76	1.13	1.83

Horizon or unit	Depth (cm)	Organic matter %	$CaCO_3$ %	Soluble salts %	Coarse sand 1000-500 um	Med. sand 500-250 um	Fine sand 250-100 um	V. fine sand 100-50 um	Coarse silt 50-20 um	Med. silt 20-10 um	Fine silt 10-5 um	V. fine silt 5-2 um	Coarse clay 2-1 um	Fine clay 1-0.5 um	V. fine clay <0.5 um
2Bkb1	148-168	n.d.	7.45	n.d.	0	3.28	39.83	27.64	11.06	3.93	3.78	4.29	2.13	1.35	2.73
2Ckb1	168-210	n.d.	6.68	n.d.	0	3.90	44.23	29.86	9.76	2.59	2.38	2.67	1.55	1.09	1.97
3Bwkb2	210-225	n.d.	8.73	n.d.	0	6.32	42.98	25.90	9.80	3.64	3.12	3.26	1.64	1.10	2.23
3Bkb2	225-250	n.d.	8.16	n.d.	0	7.75	46.20	25.88	8.86	3.24	2.69	2.82	1.63	0.95	1.89
3Cb2	250-300	n.d.	6.45	n.d.	0	8.04	51.29	25.26	6.80	2.46	2.01	2.23	1.41	0.50	0.00
3Btjkb3	300-345	n.d.	8.85	n.d.	0	11.29	48.76	22.61	7.73	2.91	2.27	2.40	1.35	0.68	0.00
3Btjkb3	345-375	n.d.	10.03	n.d.	0	10.18	48.82	23.79	7.02	2.40	1.98	2.15	1.19	0.86	1.61
3Bkb3	375-440	n.d.	10.98	n.d.	0	13.71	49.02	21.84	6.87	2.39	1.97	2.21	1.32	0.66	0.00
Trench 2, Hamburger Rock															
Crust	0-1	n.d.	10	n.d.	0	19.67	55.52	16.62	2.60	0.93	0.87	1.31	0.85	0.63	1.02
C	1-5	n.d.	9	n.d.	0.57	21.82	50.58	16.69	3.17	1.10	1.08	1.60	1.06	0.81	1.52
Bkb1	5-21	n.d.	10	n.d.	3.35	26.19	39.30	13.56	8.08	2.70	1.63	1.51	0.83	0.72	2.12
ABb2	21-29	n.d.	15	n.d.	4.43	28.89	42.85	13.99	5.56	1.37	0.89	1.00	0.74	0.29	0.00
Bkb2	29-29	n.d.	21	n.d.	2.51	19.98	36.51	19.00	10.88	3.16	2.29	2.09	1.05	0.72	1.82
2Rk1b2	39-60	n.d.	25	n.d.	0	3.00	18.50	22.83	26.14	10.39	6.48	5.02	2.09	1.43	4.11
2Rk2b2	60-80	n.d.	20	n.d.	0.50	15.26	35.48	21.42	14.87	4.61	2.88	1.97	0.73	0.48	1.81
2Rb2	80+	n.d.	13	n.d.	0	3.82	17.52	26.78	29.41	9.39	5.03	3.70	1.48	0.86	2.01
Trench 3, Hamburger Rock															
Crust	0-1	n.d.	9	n.d.	13.69	33.32	32.25	10.13	2.86	1.06	1.25	1.79	1.07	0.77	1.81
A	1-6	n.d.	10	n.d.	3.72	28.12	43.28	13.10	2.81	0.87	1.03	1.87	1.46	1.22	2.54
Bw	6-12	n.d.	10	n.d.	4.61	29.88	42.55	11.95	2.60	0.82	0.97	1.73	1.32	1.12	1.02
Bwk	12-28	n.d.	13	n.d.	1.89	26.86	46.19	12.34	2.68	1.05	1.25	2.19	1.59	1.33	2.63
2Btk1b	28-42	n.d.	25	n.d.	3.18	23.77	35.99	11.33	5.72	3.52	3.45	3.90	2.14	1.86	5.14
2Btk2b	42-65	n.d.	24	n.d.	1.76	23.92	35.67	10.31	6.66	4.63	4.14	4.09	2.03	1.74	5.05
2Bk3b	65-90	n.d.	25	n.d.	0.63	18.11	30.20	11.61	10.62	7.10	6.02	5.56	2.47	1.82	5.87
Rk	90+	n.d.	29	n.d.	0	5.27	19.35	18.02	25.58	13.21	7.45	4.94	1.66	1.01	3.53
Trench 7, Hamburger Rock															
A	0-3	n.d.	6	n.d.	0	13.48	49.40	20.16	4.62	1.59	2.29	3.53	1.87	1.13	1.95
C	3-9	n.d.	6	n.d.	0.26	22.06	52.71	15.61	2.28	0.81	1.03	1.81	1.18	0.85	1.41
Bwk1b1	9-36	n.d.	10	n.d.	0.37	20.64	44.37	14.63	4.75	2.09	2.66	3.98	2.13	1.41	2.97
Bwk2b1	36-55	n.d.	12	n.d.	0	16.83	47.18	16.18	4.94	2.14	2.65	3.98	2.08	1.39	2.63
Bkb1	55-91	n.d.	11	n.d.	0	16.34	47.25	17.43	6.17	2.41	2.52	3.26	1.56	1.02	2.05
Cb1	91-120	n.d.	14	n.d.	0	14.25	44.23	17.97	7.32	3.06	3.32	4.21	1.91	1.16	2.58
Cb1	120-145	n.d.	11	n.d.	0	17.26	47.31	16.84	5.25	2.31	2.76	3.59	1.65	0.97	5.14
2Btkb2	145-150+	n.d.	22	n.d.	1.03	21.91	41.15	12.94	5.64	3.41	3.54	4.02	1.89	1.29	3.18

Data repository Table DR-2. Chemistry and particle-size data (Wentworth units) for auger holes at Virginia Park site.

Soil horizon	Depth (cm)	$CaCO_3$ (wt. pct.)	Med. sand 500-250 um	Fine sand 250-125 um	V. fine sand 125-63 um	Coarse silt 63-31 um	Med. silt 31-18 um	Fine silt 18-9 um	V. fine silt 9-4 um	Coarse clay 4-2 um	Med. clay 2-1 um	Fine clay 1-0.5 um	V. fine clay <0.5 um
8U-10 dune swale, auger hole near VP-2													
A/Bw	0-22	1.17	1.60	23.11	34.05	17.97	5.65	3.53	3.21	2.81	2.44	2.20	3.44
Bw	22-36	5.17	1.77	23.89	33.98	18.15	5.39	2.80	2.81	2.77	2.55	2.36	3.55
Bw	36-47	4.19	1.37	22.54	34.44	18.40	5.55	2.63	2.50	2.68	2.73	2.79	4.38
Btb1	47-58	3.69	1.33	21.60	32.70	17.83	6.57	4.14	3.55	3.17	2.84	2.53	3.74
Btkb1	58-65	3.56	0.48	18.93	32.85	19.68	7.48	4.52	3.81	3.28	2.83	2.45	3.69
Btkb1	65-74	9.28	0.82	18.80	31.31	18.94	7.55	4.84	4.06	3.53	3.07	2.66	4.43
Bk1b1	74-83	12.06	0.77	19.04	32.98	19.06	7.19	4.69	3.79	3.15	2.75	2.60	3.99
Bk1b1	83-90	11.43	0.12	18.87	33.88	19.40	7.01	4.47	3.61	3.04	2.70	2.64	4.27
Bk1b1	90-99	10.28	0.21	19.57	34.41	18.79	6.44	4.23	3.58	3.11	2.78	2.69	4.19
Bk2b1	99-112	10.69	2.07	24.80	33.33	15.55	5.10	3.80	3.36	2.95	2.59	2.48	3.97
Bk2b1	112-121	13.19	4.12	26.79	31.24	14.01	4.77	3.61	3.26	2.95	2.60	2.44	4.22
Bk2b1	121-131	12.01	5.00	29.17	29.24	12.57	4.73	3.97	3.56	3.00	2.45	2.25	4.06
Bk2b1	131-142	10.57	6.68	30.05	26.93	11.48	5.13	4.39	3.74	3.03	2.35	2.04	4.19
Bk2b1	142-154	11.27	6.57	30.56	27.44	11.96	5.86	4.87	3.57	2.46	1.79	1.59	3.32
Btkqb2	154-165	7.04	4.26	26.00	27.53	13.51	7.71	6.58	4.55	2.81	1.83	1.55	3.67
Btkqb2	165-175	6.77	4.27	25.75	26.75	12.40	6.72	6.31	5.09	3.63	2.53	2.11	4.45
Btkqb2	175-184	5.88	4.80	29.43	29.72	12.31	4.45	3.73	3.43	3.09	2.59	2.38	4.09
Btkqb2	184-197	4.51	5.14	29.44	29.32	12.29	4.47	3.80	3.47	3.07	2.56	2.32	4.14
Btkqb2	197-209	5.06	8.57	32.51	28.22	10.88	3.83	3.02	2.84	2.62	2.22	2.14	3.16
Btkqb2	209-220	6.45	11.28	36.28	26.29	9.17	3.25	2.46	2.31	2.13	1.81	1.67	3.37
Bkb2	220-230	7.03	13.11	39.97	25.26	7.14	2.68	2.17	1.99	1.84	1.55	1.42	2.88
Bkb2	230-241	8.93	11.85	43.88	26.12	5.93	2.17	2.04	1.82	1.60	1.31	1.16	2.12
Bkb2	241-249	6.70	11.45	39.02	26.61	8.04	2.78	2.39	2.11	1.85	1.56	1.39	2.79
Bkb2	249-261	10.27	12.07	43.34	25.60	5.75	2.41	2.43	2.03	1.68	1.33	1.19	2.18
Bkb2	261-270	7.93	9.47	40.08	27.69	7.54	2.80	2.68	2.29	1.92	1.56	1.42	2.56
Bkb2	270-274	6.19	13.55	42.89	25.03	5.83	2.21	2.07	1.80	1.59	1.34	1.25	2.46
Bkb2	274-284	7.01	19.24	43.88	22.11	4.57	1.80	1.60	1.50	1.37	1.12	0.98	1.82
8U-11 dune crest, auger hole near VP-1													
A/Bw	0-22	0.76	2.85	29.43	36.35	15.06	3.24	2.13	1.86	1.71	1.65	1.60	4.13
Bw	22-38	1.39	6.67	39.94	34.71	9.58	1.85	1.44	1.02	1.00	1.02	0.96	1.82
Bw	38-50	1.19	0.00	13.41	32.47	20.50	6.71	3.79	4.01	4.37	4.26	4.00	6.48
Btk1b1	50-62	1.43	4.52	34.79	33.74	10.69	2.71	2.24	1.64	1.78	2.11	2.13	3.64
Btk1b1	62-71	1.54	4.67	28.49	31.70	14.54	5.37	3.26	2.71	2.57	2.36	2.06	2.26
Btk1b1	71-86	3.83	3.61	29.70	33.37	13.43	4.95	3.47	2.62	2.22	2.06	2.01	2.58
Btk2b1	86-98	5.61	5.39	35.16	32.49	10.65	3.20	2.40	2.28	2.34	2.09	1.81	2.20
Btk2b1	98-109	6.10	6.14	36.90	30.60	8.33	2.30	2.71	3.13	2.99	2.46	2.03	2.41
Btk2b1	109-118	6.24	5.87	35.27	31.10	10.43	3.45	2.64	2.44	2.38	2.13	1.89	2.41
Bkb1	118-131	5.54	10.82	40.69	29.12	8.36	3.22	2.64	1.69	1.01	0.77	0.78	0.89
Bkb1	131-139	3.53	12.61	42.17	28.43	7.54	1.85	1.32	1.09	1.10	1.08	1.06	1.73
Bkb1	139-151	2.79	10.24	46.24	28.95	5.43	1.88	1.90	1.25	0.94	0.89	1.09	1.19
Bkb2	151-161	1.74	14.38	44.09	19.47	4.26	2.55	2.14	2.27	2.77	2.84	2.81	2.42
Bkb2	161-172	2.01	8.36	38.14	30.00	8.68	4.30	3.65	2.31	1.44	1.04	1.01	1.08

Soil horizon	Depth (cm)	$CaCO_3$ (wt. pct.)	Med. sand 500-250 um	Fine sand 250-125 um	V. fine sand 125-63 um	Coarse silt 63-31 um	Med. silt 31-18 um	Fine silt 18-9 um	V. fine silt 9-4 um	Coarse clay 4-2 um	Med. clay 2-1 um	Fine clay 1-0.5 um	V. fine clay <0.5 um
Ckb2	172-183	2.01	7.14	35.66	29.37	9.65	4.15	3.49	2.67	2.23	1.88	1.64	2.13
Ckb2	183-196	3.93	2.07	30.02	39.73	12.78	2.18	1.73	1.77	2.17	2.47	2.63	2.45
Ckb2	196-210	3.41	2.65	33.48	36.55	10.75	3.39	3.45	2.66	2.04	1.63	1.57	1.83
Ckb2	210-224	3.76	2.71	34.75	36.19	8.56	1.30	1.75	2.82	4.11	3.33	2.33	2.14
Ckb2	224-237	2.96	2.16	30.70	41.97	12.36	2.58	2.06	1.67	1.62	1.56	1.68	1.65
Ckb2	237-251	4.10	1.87	32.11	38.58	10.94	2.38	2.61	2.83	2.85	2.18	1.76	1.87
Cyb2	251-265	3.26	1.73	30.60	43.47	11.14	1.46	1.30	1.34	1.93	2.37	2.63	2.03
Cyb2	265-278	4.22	1.83	31.22	43.00	11.45	1.79	1.67	1.60	1.99	1.94	1.77	1.74
8U-12 dune crest, auger hole#													
A	0-27 upper	2.16											
Bw	0-27	5.17											
Bwk	27-37	5.61	3.36	27.30	36.82	18.86	4.82	2.01	1.44	1.25	1.18	1.01	1.96
Btk1b1	37-48	4.07	4.43	27.09	31.29	15.71	5.38	3.30	2.88	2.61	2.15	1.64	3.52
Btk1b1	48-60	4.91	4.07	27.20	30.32	14.67	4.95	3.11	3.17	3.32	2.90	2.25	4.03
Btk2b1	60-71	3.77											
Btk2b1	71-83	7.50											
Btk3b1	83-96	11.35	2.35	20.45	28.44	17.30	7.96	5.13	4.54	4.12	3.32	2.61	3.79
Btk3b1	96-106	13.44	9.48	28.36	25.83	13.44	5.51	3.59	3.36	3.09	2.45	1.80	3.11
Bk1b1	106-116	13.02	25.03	37.56	22.00	8.28	2.72	1.18	0.65	0.53	0.57	0.54	0.94
Bk1b1	116-128	12.92											
Bk1b1	128-137	10.19											
Bk2b1	137-147	8.08	17.55	37.15	22.58	8.05	2.93	2.07	2.18	2.15	1.75	1.38	2.21
Bk2b1	147-158	6.40	12.75	40.83	28.65	9.88	2.78	1.23	0.77	0.72	0.73	0.69	0.99
Bk2b1	158-170	6.81											
Bk2b1	170-180	6.14											
Btkqb2	180-191	5.80	10.39	35.71	26.14	8.62	3.53	2.90	2.76	2.92	2.53	2.17	2.34
Btkqb2	191-203	5.90	7.12	34.07	32.97	11.84	3.16	2.12	1.96	1.94	1.68	1.56	1.57
Btkqb2	203-216	6.68	7.06	30.60	25.72	9.14	3.42	3.72	4.60	4.69	3.88	3.33	3.84
Btkqb2	216-227	6.05	11.20	37.64	27.67	9.52	2.88	2.09	2.05	1.89	1.61	1.50	1.96
Bk1b2	227-239	6.52	9.59	35.91	26.73	9.32	3.29	2.78	2.92	2.86	2.33	1.87	2.41
Bk1b2	239-251	6.39											
Bk1b2	251-262	6.55	16.20	41.48	23.04	5.55	1.77	1.66	2.08	2.24	1.92	1.59	2.47
Bk1b2	262-273	5.47	16.99	45.90	23.83	4.39	1.64	1.77	1.52	1.17	0.86	0.73	1.20
2Btkb3	273-279	8.92	18.04	41.32	21.71	4.43	1.35	1.72	2.47	2.64	2.13	1.68	2.53
2Btkb3	279-290	11.06	6.93	38.32	27.99	8.73	4.07	3.27	2.97	2.57	1.85	1.55	1.77
2Btkb3	290-299	7.71	7.45	36.84	30.37	10.88	3.78	2.47	2.16	1.94	1.48	1.26	1.36
2Btkb3	299-310	6.53	12.57	40.81	21.68	4.02	1.65	2.41	2.97	3.48	3.41	2.94	4.05
2Btkb3	310-317	6.79	14.24	39.97	20.78	5.08	2.81	2.68	2.77	2.95	2.77	2.36	3.60

Particle size data not shown for intervals 0-27, 60-83, 116-137, 158-180, and 239-251 due to problems with disaggregation of samples.

9U-22, dune crest auger hole													
A	0-15	3.03	1.34	21.50	35.60	20.56	7.04	4.03	3.45	2.96	2.12	1.39	0.00
Btk1	15-27	4.01	0.35	6.62	17.70	26.86	19.14	9.93	7.27	5.11	2.94	1.84	2.26
Btk1	27-41	4.86	0.72	13.45	25.45	21.93	13.42	9.00	6.56	3.99	2.19	1.39	1.90
Btk2	41-53	4.64	1.93	12.55	19.56	19.21	14.88	12.24	9.15	4.65	2.16	1.29	2.38
Btk2	53-67	6.31	0.86	16.29	27.58	18.78	11.52	10.20	6.92	3.39	1.75	1.10	1.62

Soil horizon	Depth (cm)	$CaCO_3$ (wt. pct.)	Med. sand 500-250 um	Fine sand 250-125 um	V. fine sand 125-63 um	Coarse silt 63-31 um	Med. silt 31-18 um	Fine silt 18-9 um	V. fine silt 9-4 um	Coarse clay 4-2 um	Med. clay 2-1 um	Fine clay 1-0.5 um	V. fine clay <0.5 um
Btk3	67-75	9.83	3.18	24.43	29.74	15.34	7.30	6.11	5.12	3.49	2.00	1.21	2.10
Btk3	75-87	12.28	4.09	29.82	31.13	12.19	4.59	5.32	4.99	3.27	1.87	1.15	1.58
Bk1	87-97	12.38	3.92	31.44	31.87	10.95	4.31	5.44	5.03	3.12	1.69	1.06	1.16
Bk2	97-107	11.19	4.90	35.92	33.05	10.11	3.20	3.12	2.78	2.41	1.76	1.18	1.58
Bk2	107-116	9.67	3.88	34.22	33.39	10.87	3.61	3.42	3.09	2.65	1.94	1.36	1.58
Bk2	116-124	7.83	5.74	36.18	31.33	9.38	3.44	3.97	3.51	2.51	1.54	0.96	1.44
Bk3	124-136	6.47	5.20	33.75	30.93	11.04	5.24	4.89	3.43	2.13	1.26	0.84	1.29
Bk3	136-146	5.24	6.83	38.67	30.90	8.78	2.93	2.75	2.51	2.23	1.58	1.04	1.79
C	146-156	3.82	4.85	44.20	32.97	5.05	1.73	2.59	2.62	2.34	1.56	0.99	1.11
Bt1b1	156-165	4.08	4.24	35.81	33.58	10.11	3.17	3.17	2.81	2.44	1.78	1.22	1.68
Bt1b1	165-178	3.66	2.29	32.95	35.15	9.06	3.90	5.16	4.16	2.88	1.68	1.09	1.68
Bt2b1	178-190	3.11	1.96	24.29	33.14	17.97	6.64	3.96	3.65	3.11	2.07	1.31	1.90
Bt2b1	190-204	3.15	1.76	30.67	38.99	12.47	2.99	3.07	2.93	2.59	1.87	1.29	1.36
Bt2b1	204-216	3.5	1.88	29.12	37.16	12.98	3.58	3.92	3.82	3.00	1.89	1.20	1.47
Bwb1	216-229	4.17	1.25	25.57	36.77	15.40	4.22	4.01	4.17	3.37	2.16	1.39	1.70
Bwb1	229-240	5.04	0.75	27.22	40.70	15.42	3.24	3.00	3.08	2.58	1.71	1.11	1.21
Cb1	240-254		2.12	29.16	36.28	13.72	3.97	3.67	3.39	2.84	1.97	1.26	1.62
Cb1	254-265	4.8	2.37	32.11	38.56	12.77	3.03	2.67	2.42	2.17	1.56	1.03	1.31
Cyb1	265-274	4.83	2.03	30.50	37.73	12.49	3.42	3.42	3.25	2.76	1.88	1.22	1.30
Bt1yb2	274-283	4.68	2.91	37.83	36.49	8.36	1.84	2.73	3.09	2.79	1.81	1.11	1.03
Bt1yb2	283-295	3.29	2.44	30.96	34.15	10.53	3.30	4.63	5.23	3.88	2.13	1.29	1.46
Bt2kyb2	295-305	3.51	2.05	31.87	35.76	8.83	2.60	4.87	5.59	3.88	1.98	1.14	1.43
Bt3kyb2	305-314	7.62	2.78	29.29	33.15	12.09	4.66	5.48	5.03	3.29	1.82	1.09	1.32
Bt3kyb2	314-325	12.04	3.04	31.22	32.99	10.06	4.74	6.06	4.92	2.90	1.48	0.91	1.69
Bk1b2	325-335	15.61	3.45	32.52	32.76	10.53	3.96	4.94	4.73	3.07	1.72	1.13	1.20
Bk1b2	335-343	18.53	4.62	32.80	31.94	12.10	4.85	4.37	3.54	2.19	1.25	0.87	1.48
Bk1b2	343-354	19.98	5.28	34.06	31.74	10.57	3.51	3.80	3.79	2.85	1.74	1.12	1.56
Bk1b2	354-364	16.36	5.18	34.06	31.34	10.22	3.72	3.74	3.64	3.05	2.05	1.37	1.63
Bk2b2	364-372	14.5	5.82	33.31	29.15	10.86	5.25	4.55	3.55	2.71	1.77	1.14	1.88
Bk2b2	372-383	11.6	8.45	37.38	27.93	8.39	3.51	3.86	3.57	2.64	1.65	1.06	1.58
9U-23 dune crest, edge of dune field, auger hole													
A/Bw	0-22	2.14	1.99	34.15	40.27	10.68	2.40	3.28	2.72	2.19	1.62	0.70	0.00
Bw	22-33	2.63	2.72	30.67	37.55	14.47	4.10	3.26	2.61	2.15	1.67	0.79	0.00
Btj	33-46	5.04	1.88	32.34	39.91	11.76	2.69	3.37	2.91	2.45	1.86	0.83	0.00
Btk1b1	46-58	6.03	2.36	31.55	38.27	12.06	2.87	4.06	3.74	2.76	1.67	0.66	0.00
Btk1b1	58-67	10.58	2.62	29.91	36.95	15.30	4.29	3.27	2.73	2.31	1.80	0.82	0.00
Btk2b1	67-75	13.49	3.00	30.24	36.38	15.31	4.67	3.26	2.62	2.20	1.61	0.70	0.00
Btk2b1	75-83	14.03	4.18	33.14	35.34	13.18	3.62	2.97	2.50	2.29	1.88	0.89	0.00
Btk2b1	83-96	13.63	5.88	33.92	33.08	12.31	4.04	2.99	2.15	1.75	1.31	0.97	1.58
Btk3b1	96-105	12.58	7.76	36.73	32.28	10.87	3.33	2.71	2.15	1.90	1.54	0.74	0.00
Btk3b1	105-115	10.42	6.91	40.31	31.91	7.69	2.97	3.47	2.82	2.10	1.41	0.42	0.00
Bk1b1	115-125	7.97	7.06	37.59	32.59	10.29	3.15	2.43	1.76	1.51	1.17	0.87	1.60
Bk1b1	125-138	5.55	5.46	38.13	34.34	8.21	2.42	3.56	3.18	2.41	1.60	0.69	0.00
Bky2b1	138-148	6.27	5.53	34.03	33.35	11.55	3.01	2.64	2.45	2.27	1.71	1.16	2.30
Bky2b1	148-159	4.41	5.98	34.88	33.59	11.13	2.63	2.36	2.35	2.28	1.72	1.14	1.95

Soil horizon	Depth (cm)	$CaCO_3$ (wt. pct.)	Med. sand 500-250 um	Fine sand 250-125 um	V. fine sand 125-63 um	Coarse silt 63-31 um	Med. silt 31-18 um	Fine silt 18-9 um	V. fine silt 9-4 um	Coarse clay 4-2 um	Med. clay 2-1 um	Fine clay 1-0.5 um	V. fine clay <0.5 um
Bky2b1	159-171	3.1	4.72	36.28	34.18	8.81	1.99	2.71	2.76	2.70	2.01	1.33	2.53
Btb2	171-182	4.36	3.61	32.85	32.20	7.84	3.88	7.48	6.45	3.41	1.66	0.62	0.00
Btkb2	182-192	3.21	4.23	33.60	32.57	8.68	3.35	6.15	5.79	3.32	1.67	0.66	0.00
Btkb2	192-201	4.65	5.45	35.30	31.17	8.45	3.84	6.11	5.02	2.78	1.48	0.39	0.00
Btkb2	201-208	9.37	5.22	37.47	32.72	8.08	2.61	4.17	4.23	2.99	1.78	0.74	0.00
Btkb2	208-218	10.35	10.18	35.86	29.22	10.60	3.98	2.97	2.42	2.18	1.75	0.85	0.00
Bk1b2	218-228	12.36	8.91	40.60	28.67	6.76	2.68	3.50	3.38	2.77	1.90	0.84	0.00
Bk1b2	228-236	12.06	9.06	40.08	29.32	7.01	2.35	3.58	3.59	2.63	1.67	0.72	0.00
Bk1b2	236-248	5.64	9.86	37.20	28.62	9.09	3.16	2.93	2.50	2.06	1.49	1.04	2.05
Bk2b2	248-260	8.44	10.54	39.30	28.51	8.53	3.26	2.85	2.38	2.13	1.70	0.81	0.00
Bk2b2	260-270	7.19	10.99	39.07	27.88	7.69	2.55	2.71	2.45	2.08	1.51	1.05	2.03
Bk2b2	270-280	5.73	10.62	38.87	28.25	8.19	2.76	3.07	3.16	2.59	1.75	0.75	0.00
Btkb3	280-290	10.41	11.96	38.94	26.51	7.56	2.78	2.84	2.57	2.16	1.55	1.07	2.06
Btkb3	290-298	11.11	16.73	42.31	23.85	5.89	2.37	2.25	2.24	2.03	1.57	0.76	0.00
sandstone	298-300+	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
00U-27 dune swale, auger hole													
A	0-10	1.24	1.27	23.78	39.15	19.52	4.96	2.64	2.12	1.80	1.54	1.21	2.01
Bwk	10-30	3.91	20.77	41.16	21.86	6.96	1.98	1.24	1.26	1.19	1.03	0.85	1.70
Btb1	30-50	4.88	2.99	25.95	34.40	17.28	5.42	3.17	2.57	2.22	1.87	1.49	2.64
Btb1	50-65	4.25	1.15	18.42	33.33	21.82	8.53	4.41	3.37	2.74	2.22	1.84	2.17
Btkb1	65-84	3.33	1.34	18.52	31.80	21.20	8.83	4.76	3.69	3.01	2.39	1.89	2.57
Btkb1	84-100	2.30	1.50	19.03	31.34	20.78	9.01	4.92	3.80	3.11	2.44	1.84	2.23
Btkb1	100-116	2.26	0.94	17.68	32.44	20.96	8.61	4.82	3.74	3.14	2.58	2.17	2.93
Btkqb1	116-128	4.49	1.20	19.48	33.41	20.45	8.00	4.36	3.34	2.80	2.33	1.94	2.70
Btkqb1	128-141	10.52	2.54	24.77	33.82	18.48	6.70	3.45	2.60	2.22	1.88	1.56	1.99
Btkqb1	141-156	9.62	3.65	28.30	34.28	15.41	5.35	3.30	2.53	2.19	1.84	1.53	1.63
Bkq1b1	156-168	11.10	3.71	28.50	35.98	15.29	4.51	2.84	2.25	1.97	1.69	1.45	1.83
Bkq1b1	168-179	11.60	3.73	28.57	35.73	15.00	4.53	2.98	2.39	2.07	1.74	1.44	1.82
Bkq1b1	179-194	11.24	6.14	31.85	32.29	13.07	4.32	2.88	2.38	2.09	1.71	1.42	1.85
Bkq2b1	194-208	10.06	7.48	33.51	32.01	11.99	3.81	2.59	2.18	1.93	1.58	1.35	1.57
Bkq2b1	208-221	9.90	8.31	34.32	30.34	10.92	3.72	2.75	2.43	2.18	1.76	1.52	1.77
Bkq2b1	221-233	10.41	11.84	33.74	27.48	10.77	4.01	2.76	2.38	2.10	1.68	1.38	1.88
Bkq3b1	233-242	9.98	11.37	36.18	26.42	9.64	3.96	2.93	2.58	2.20	1.67	1.38	1.67
Bkq3b1	242-252	10.95	14.40	35.52	25.30	9.34	3.64	2.68	2.36	2.05	1.58	1.24	1.90
Bkq3b1	242-265	9.27	10.50	36.49	26.23	8.95	3.95	3.14	2.79	2.42	1.81	1.44	2.28
Bkq3b1	265-274	8.07	12.52	37.22	26.67	8.89	3.45	2.59	2.25	1.99	1.53	1.18	1.72
Bkq3b1	274-283	7.28	12.91	37.49	26.68	8.35	3.41	2.61	2.29	1.99	1.52	1.29	1.43
Btkb2	283-291	6.14	8.64	31.82	27.94	11.82	4.93	3.59	3.08	2.57	1.91	1.46	2.24
Btkb2	291-301	8.16	7.71	28.75	25.02	11.27	5.78	5.11	4.70	3.82	2.65	1.99	3.20
Btkb2	301-313	9.07	6.92	28.60	23.70	10.15	5.68	5.53	5.50	4.66	3.21	2.39	3.66
Btkb2	313-324	6.41	5.67	33.79	32.09	11.06	3.58	2.94	2.80	2.57	1.98	1.67	1.88

Data Repository Table DR-3. Magnetic properties and Fe-Ti contents of soil pit and auger samples from Virginia Park site.

[Elemental data determined by inductively coupled plasma method; n.d., not determined]

Sample number and depth below surface (cm)	Magnetic susceptibility, MS (m3/kg)	FDMS (%)	Isothermal remanent magnetization, IRM (Am2/kg)	Fe (ppm)	Ti (ppm)
VP1/0-6	2.03E-07	-1.46	2.48E-03	11200	1680
VP1/6-19	2.23E-07	-1.62	2.48E-03	13400	2000
VP1/19-30	2.43E-07	-2.27	2.81E-03	12900	1950
VP1/30-55	3.32E-07	-1.57	3.96E-03	13900	2010
VP1/55-66	3.82E-07	-1.20	4.85E-03	13700	1970
VP1/66-78	3.42E-07	0.16	4.30E-03	11700	1700
VP1/80-90	2.50E-07	-0.19	3.04E-03	9860	1450
VP2/0-5	2.23E-07	-2.01	2.75E-03	12300	2010
VP2/5-14	2.27E-07	-2.11	2.73E-03	13200	2160
VP2/14-44	2.15E-07	-1.61	2.45E-03	12400	2170
VP2/44-55	2.31E-07	-1.21	2.70E-03	12400	1930
VP2/55-85	3.19E-07	-2.34	3.87E-03	13100	1930
VP2/110-115	2.47E-07	-1.12	2.86E-03	10900	1500
8U-10/0-22	2.52E-07	3.35	3.01E-03	12600	1750
8U-10/22-36	2.50E-07	3.23	2.70E-03	12300	1660
8U-10/36-47	3.57E-07	3.77	4.00E-03	13400	2150
8U-10/47-58	4.16E-07	3.24	4.81E-03	14400	2240
8U-10/58-65	4.61E-07	3.00	5.42E-03	15300	2340
8U-10/65-74	4.39E-07	2.29	5.29E-03	13900	1920
8U-10/74-83	4.05E-07	2.64	4.79E-03	12900	1810
8U-10/83-90	3.85E-07	2.89	4.43E-03	12400	1890
8U-10/90-99	3.42E-07	2.63	3.83E-03	11700	1790
8U-10/99-112	2.79E-07	3.14	3.01E-03	10300	1630
8U-10/112-121	2.32E-07	3.55	2.47E-03	10600	1420
8U-10/121-131	1.87E-07	3.69	1.94E-03	9740	1120
8U-10/131-142	1.61E-07	2.92	1.65E-03	9340	1350
8U-10142-154	1.60E-07	3.41	1.63E-03	8620	1170
8U-10/154-165	1.72E-07	3.05	1.75E-03	9790	1220
8U-10/165-175	1.66E-07	1.64	1.63E-03	9920	1250
8U-10/175-184	1.75E-07	2.00	1.85E-03	9250	1210
8U-10/184-197	1.67E-07	3.66	1.72E-03	9430	1290
8U-10/197-209	1.52E-07	1.11	1.55E-03	9300	1190
8U-10/209-220	1.26E-07	2.37	1.28E-03	6630	944
8U-10/220-230	9.38E-08	1.57	9.43E-04	5500	768
8U-10/230-241	6.20E-08	0.71	6.21E-04	4600	636
8U-10/241-249	1.14E-07	0.79	1.21E-03	6730	955
8U-10/249-261	5.49E-08	-0.62	5.50E-04	4440	740
8U-10/261-270	9.55E-08	1.19	1.04E-03	5580	831
8U-10/270-274	7.65E-08	1.00	8.40E-04	5710	691
8U-10/274-284	6.38E-08	0.35	7.03E-04	5790	606

8U-11/0-22	1.97E-07	0.00	2.11E-03	10400	1360
8U-11/22-38	2.15E-07	0.00	2.21E-03	11200	1500
8U-11/38-50	2.87E-07	0.00	3.17E-03	11500	1470
8U-11/50-62	3.07E-07	0.00	3.53E-03	12600	1620
8U-11/62-71	3.51E-07	0.00	4.15E-03	12200	1540
8U-11/71-86	3.48E-07	0.00	4.18E-03	10300	1460
8U-11/86-98	3.30E-07	0.00	3.96E-03	9870	1500
8U-11/98-109	2.60E-07	0.00	3.10E-03	8490	1100
8U-11/109-118	2.70E-07	0.00	3.14E-03	8400	1030
8U-11/118-131	2.20E-07	0.00	2.51E-03	8290	976
8U-11/131-139	1.63E-07	0.00	1.79E-03	7710	868
8U-11/139-151	1.18E-07	0.00	1.24E-03	7120	776
8U-11/151-161	1.05E-07	0.00	1.09E-03	5080	528
8U-11/161-172	1.70E-07	0.00	1.79E-03	8110	994
8U-11/172-183	1.87E-07	0.00	1.97E-03	8610	1080
8U-11/183-196	3.12E-07	0.00	3.33E-03	11400	1740
8U-11/196-210	2.19E-07	0.00	2.25E-03	10900	1690
8U-11/210-224	2.00E-07	0.00	2.02E-03	8730	1230
8U-11/224-237	1.90E-07	0.00	1.90E-03	9430	1210
8U-11/237-251	1.91E-07	0.00	1.88E-03	9850	1420
8U-11/251-265	1.96E-07	0.00	1.96E-03	9480	1360
8U-11/265-278	1.99E-07	0.00	2.03E-03	10200	1460
8U-12/0-13	1.98E-07	0.00	2.15E-03	n.d.	n.d.
8U-12/13-27	2.05E-07	0.00	2.13E-03	n.d.	n.d.
8U-12/27-37	2.11E-07	0.00	2.25E-03	n.d.	n.d.
8U-12/37-48	2.30E-07	0.00	2.52E-03	n.d.	n.d.
8U-12/48-60	2.05E-07	0.00	2.27E-03	n.d.	n.d.
8U-12/60-71	1.85E-07	0.00	2.10E-03	n.d.	n.d.
8U-12/71-83	2.88E-07	0.00	3.37E-03	n.d.	n.d.
8U-12/83-96	3.61E-07	0.00	4.37E-03	n.d.	n.d.
8U-12/96-106	3.02E-07	0.00	3.74E-03	n.d.	n.d.
8U-12/106-116	1.67E-07	0.00	2.01E-03	n.d.	n.d.
8U-12/116-128	1.54E-07	0.00	1.83E-03	n.d.	n.d.
8U-12/128-137	1.44E-07	0.00	1.70E-03	n.d.	n.d.
8U-12/137-147	1.44E-07	0.00	1.72E-03	n.d.	n.d.
8U-12/147-158	1.30E-07	0.00	1.47E-03	n.d.	n.d.
8U-12/158-170	1.53E-07	0.00	1.68E-03	n.d.	n.d.
8U-12/170-180	1.73E-07	0.00	1.90E-03	n.d.	n.d.
8U-12/1180-191	2.62E-07	0.00	2.88E-03	n.d.	n.d.
8U-12/191-203	2.17E-07	0.00	2.31E-03	n.d.	n.d.
8U-12/203-216	2.04E-07	0.00	2.13E-03	n.d.	n.d.
8U-12/216-227	1.78E-07	0.00	1.89E-03	n.d.	n.d.
8U-12/227-239	1.36E-07	0.00	1.45E-03	n.d.	n.d.
8U-12/239-251	9.63E-08	0.00	9.59E-04	n.d.	n.d.
8U-12/251-262	9.47E-08	0.00	9.91E-04	n.d.	n.d.
8U-12/262-273	7.98E-08	0.00	7.88E-04	n.d.	n.d.
8U-12/273-279	8.24E-08	0.00	8.72E-04	n.d.	n.d.
8U-12/279-290	5.65E-08	0.00	5.38E-04	n.d.	n.d.
8U-12/290-299	7.30E-08	0.00	7.31E-04	n.d.	n.d.
8U-12/299-310	6.88E-08	0.00	7.18E-04	n.d.	n.d.
8U-12/310-317	7.53E-08	0.00	8.32E-04	n.d.	n.d.

9U-21/0-5	2.17E-07	0.00	2.44E-03	n.d.	n.d.
9U-21/5-25	1.58E-07	0.00	1.82E-03	n.d.	n.d.
9U-21/25-70	1.82E-07	0.00	2.30E-03	n.d.	n.d.
9U-21/70-90	2.16E-07	0.00	2.71E-03	n.d.	n.d.
9U-21/90-115	2.67E-07	0.00	3.45E-03	n.d.	n.d.
9U-21/115-128	2.08E-07	0.00	2.51E-03	n.d.	n.d.
9U-21/128-148	1.48E-07	0.00	1.76E-03	n.d.	n.d.
9U-21/148-168	1.77E-07	0.00	1.99E-03	n.d.	n.d.
9U-21/168-201	1.49E-07	0.00	1.68E-03	n.d.	n.d.
9U-21/210-225	1.01E-07	0.00	1.02E-03	n.d.	n.d.
9U-21/225-250	7.08E-08	0.00	7.10E-04	n.d.	n.d.
9U-21/250-300	8.54E-08	0.00	8.33E-04	n.d.	n.d.
9U-21/300-345	9.27E-08	0.00	9.93E-04	n.d.	n.d.
9U-21/345-375	9.17E-08	0.00	9.78E-04	n.d.	n.d.
9U-21/375-440	9.36E-08	0.00	1.01E-03	n.d.	n.d.
9U-22/0-15	2.21E-07	0.00	2.38E-03	n.d.	n.d.
9U-22/15-27	2.28E-07	0.00	2.50E-03	n.d.	n.d.
9U-22/27-41	2.80E-07	0.00	3.10E-03	n.d.	n.d.
9U-22/41-53	3.48E-07	0.00	4.08E-03	n.d.	n.d.
9U-22/53-67	3.68E-07	0.00	4.32E-03	n.d.	n.d.
9U-22/67-75	3.33E-07	0.00	4.19E-03	n.d.	n.d.
9U-22/75-87	2.62E-07	0.00	3.24E-03	n.d.	n.d.
9U-22/87-97	2.40E-07	0.00	2.85E-03	n.d.	n.d.
9U-22/97-107	1.95E-07	0.00	2.24E-03	n.d.	n.d.
9U-22/107-116	1.67E-07	0.00	1.95E-03	n.d.	n.d.
9U-22/116-124	1.61E-07	0.00	1.77E-03	n.d.	n.d.
9U-22/124-136	1.45E-07	0.00	1.61E-03	n.d.	n.d.
9U-22/136-146	1.12E-07	0.00	1.21E-03	n.d.	n.d.
9U-22/146-156	1.16E-07	0.00	1.28E-03	n.d.	n.d.
9U-22/156-165	1.61E-07	0.00	1.83E-03	n.d.	n.d.
9U-22/165-178	2.67E-07	0.00	2.83E-03	n.d.	n.d.
9U-22/178-190	2.30E-07	0.00	2.60E-03	n.d.	n.d.
9U-22/190-204	1.99E-07	0.00	2.11E-03	n.d.	n.d.
9U-22/204-216	2.07E-07	0.00	2.25E-03	n.d.	n.d.
9U-22/216-229	2.21E-07	0.00	2.43E-03	n.d.	n.d.
9U-22/229-240	2.06E-07	0.00	2.19E-03	n.d.	n.d.
9U-22/240-254	1.90E-07	0.00	1.94E-03	n.d.	n.d.
9U-22/254-265	2.05E-07	0.00	2.03E-03	n.d.	n.d.
9U-22/265-274	1.87E-07	0.00	2.02E-03	n.d.	n.d.
9U-22/274-283	1.81E-07	0.00	1.95E-03	n.d.	n.d.
9U-22/283-295	1.75E-07	0.00	1.67E-03	n.d.	n.d.
9U-22/295-305	1.83E-07	0.00	1.92E-03	n.d.	n.d.
9U-22/305-314	1.87E-07	0.00	2.03E-03	n.d.	n.d.
9U-22/314-325	1.70E-07	0.00	1.77E-03	n.d.	n.d.
9U-22/325-335	1.55E-07	0.00	1.64E-03	n.d.	n.d.
9U-22/335-343	1.33E-07	0.00	1.42E-03	n.d.	n.d.
9U-22/343-354	1.20E-07	0.00	1.27E-03	n.d.	n.d.
9U-22/354-364	1.19E-07	0.00	1.30E-03	n.d.	n.d.
9U-22/364-372	1.05E-07	0.00	1.16E-03	n.d.	n.d.
9U-22/372-383	8.33E-08	0.00	8.82E-04	n.d.	n.d.

9U-23/0-22	1.44E-07	0.52	1.52E-03	n.d.	n.d.
9U-23/22-23	1.67E-07	0.76	1.57E-03	n.d.	n.d.
9U-23/33-46	1.94E-07	1.55	2.10E-03	n.d.	n.d.
9U-23/46-58	2.48E-07	1.34	2.84E-03	n.d.	n.d.
9U-23/58-67	2.58E-07	1.30	3.10E-03	n.d.	n.d.
9U-23/67-75	2.41E-07	1.36	2.89E-03	n.d.	n.d.
9U-23/75-83	2.30E-07	0.81	2.79E-03	n.d.	n.d.
9U-23/83-96	1.93E-07	0.04	2.24E-03	n.d.	n.d.
9U-23/96-105	1.63E-07	0.95	1.90E-03	n.d.	n.d.
9U-23/105-115	1.24E-07	0.02	1.37E-03	n.d.	n.d.
9U-23/115-125	1.26E-07	0.46	1.37E-03	n.d.	n.d.
9U-23/125-138	1.23E-07	-0.15	1.28E-03	n.d.	n.d.
9U-23/138-148	1.37E-07	-0.19	1.49E-03	n.d.	n.d.
9U-23/148-159	1.25E-07	-0.49	1.31E-03	n.d.	n.d.
9U-23/159-171	1.22E-07	0.19	1.23E-03	n.d.	n.d.
9U-23/171-182	1.63E-07	0.98	1.67E-03	n.d.	n.d.
9U-23/182-192	1.72E-07	1.26	1.76E-03	n.d.	n.d.
9U-23/192-201	1.63E-07	1.14	1.68E-03	n.d.	n.d.
9U-23/201-208	1.43E-07	0.96	1.51E-03	n.d.	n.d.
9U-23/208-218	1.17E-07	0.09	1.22E-03	n.d.	n.d.
9U-23/218-228	9.39E-08	-1.09	1.00E-03	n.d.	n.d.
9U-23/228-236	1.00E-07	-0.89	1.06E-03	n.d.	n.d.
9U-23/236-248	9.34E-08	-1.24	9.98E-04	n.d.	n.d.
9U-23/248-260	7.91E-08	-1.61	8.13E-04	n.d.	n.d.
9U-23/260-270	8.51E-08	-1.85	8.13E-04	n.d.	n.d.
9U-23/270-280	1.22E-07	-0.38	1.34E-03	n.d.	n.d.
9U-23/280-290	9.71E-08	-1.32	1.09E-03	n.d.	n.d.
9U-23/290-298	2.43E-08	-9.95	2.57E-04	n.d.	n.d.
OOU-27/0-10	2.19E-07	3.11	2.46E-03	n.d.	n.d.
OOU-27/10-30	2.36E-07	2.98	2.51E-03	n.d.	n.d.
OOU-27/30-50	2.39E-07	2.68	2.57E-03	n.d.	n.d.
OOU-27/50-65	2.88E-07	2.45	3.25E-03	n.d.	n.d.
OOU-27/65-84	3.83E-07	3.51	4.67E-03	n.d.	n.d.
OOU-27/84-100	4.40E-07	3.68	5.14E-03	n.d.	n.d.
OOU-27/100-116	4.68E-07	2.57	5.60E-03	n.d.	n.d.
OOU-27/116-128	4.17E-07	1.99	4.98E-03	n.d.	n.d.
OOU-27/128-141	4.17E-07	1.28	5.06E-03	n.d.	n.d.
OOU-27/141-156	3.18E-07	1.11	3.53E-03	n.d.	n.d.
OOU-27/156-168	2.49E-07	0.66	2.66E-03	n.d.	n.d.
OOU-27/168-179	2.14E-07	1.38	2.26E-03	n.d.	n.d.
OOU-27/179-194	1.56E-07	0.36	1.61E-03	n.d.	n.d.
OOU-27/194-208	1.50E-07	0.55	1.50E-03	n.d.	n.d.
OOU-27/208-221	1.52E-07	0.99	1.52E-03	n.d.	n.d.
OOU-27/221-233	1.55E-07	0.13	1.60E-03	n.d.	n.d.
OOU-27/233-242	1.41E-07	-0.39	1.47E-03	n.d.	n.d.
OOU-27/242-252	1.39E-07	0.36	1.46E-03	n.d.	n.d.
OOU-27/242-265	1.23E-07	-0.98	1.28E-03	n.d.	n.d.
OOU-27/265-274	1.41E-07	0.78	1.48E-03	n.d.	n.d.
OOU-27/274-283	1.31E-07	0.08	1.36E-03	n.d.	n.d.
OOU-27/283-291	1.92E-07	1.43	2.03E-03	n.d.	n.d.
OOU-27/291-301	1.89E-07	2.08	2.10E-03	n.d.	n.d.
OOU-27/301-313	1.73E-07	1.02	2.03E-03	n.d.	n.d.
OOU-27/313-324	1.68E-07	1.45	1.77E-03	n.d.	n.d.

Figure DR1. Probability density plots showing the typical equivalent dose (D_e) distribution for all OSL samples examined in this study; individual single-aliquot D_e determinations (with their associated errors) are shown plotted in rank order. Most samples (e.g. OSL-1) exhibit uniform distributions for both coarse-grains of 90-125 µm diameter (e.g. Figure A), and fine-grains of 4-11 µm diameter (e.g. Figure B). Sample OSL-5, however, exhibits a more scattered distribution than all other samples examined in this study, for both coarse-grains of 90-125 µm diameter (Figure I), and fine-grains of 4-11 µm diameter (Figure J).

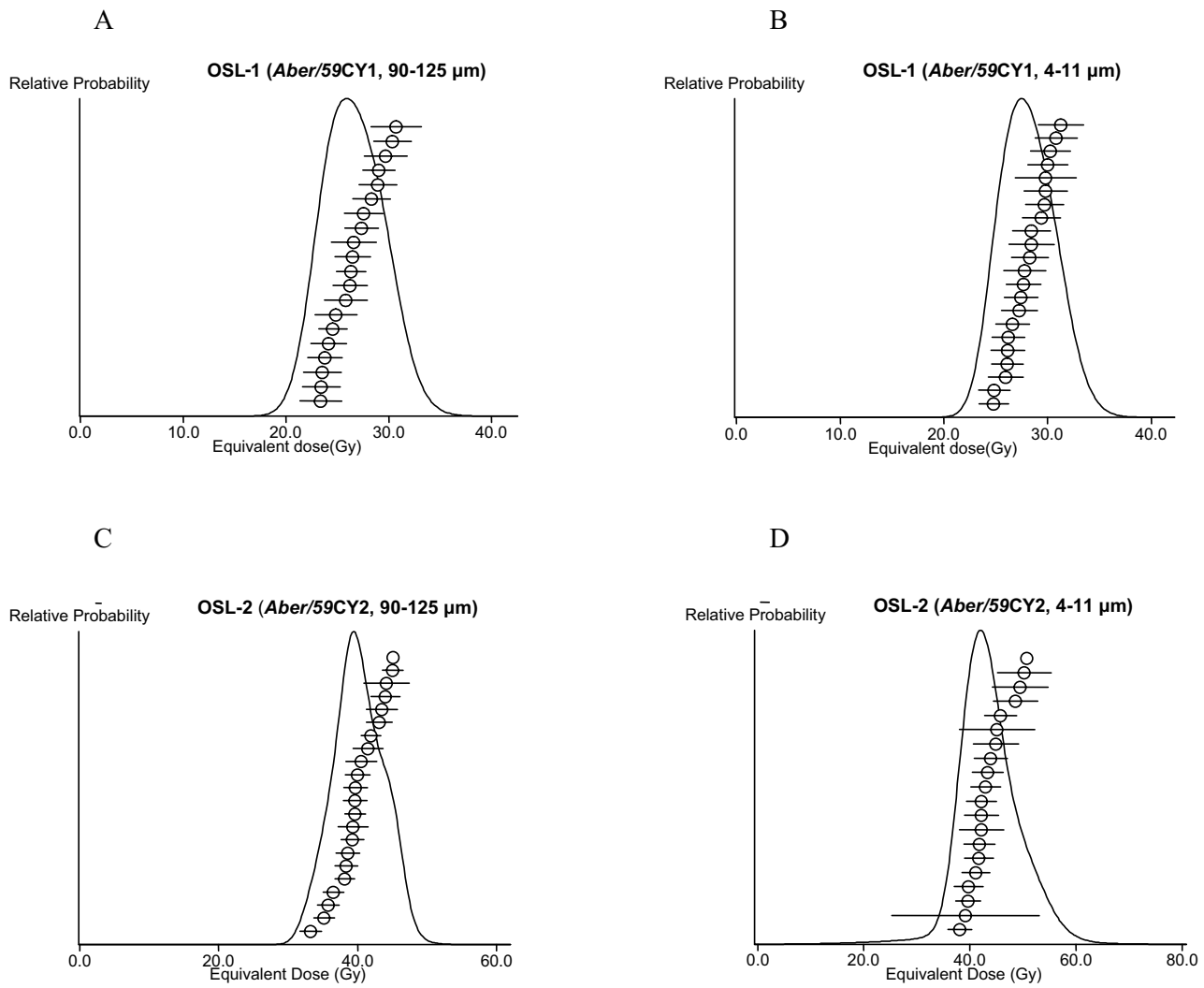
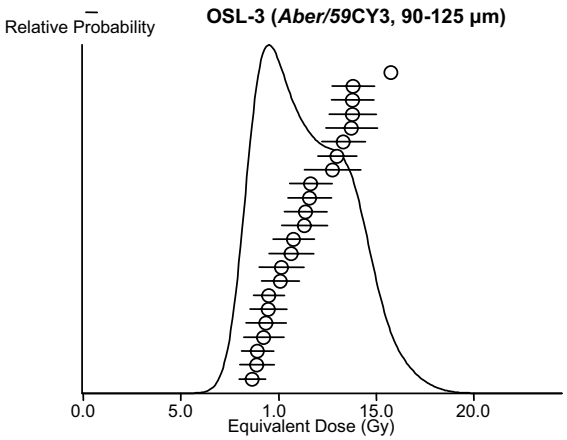


Fig. DR-4 cont.

E



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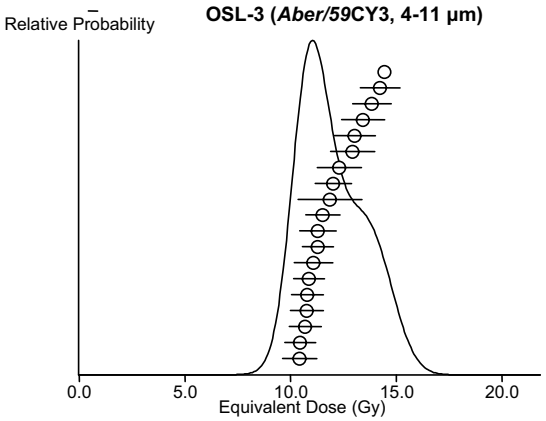

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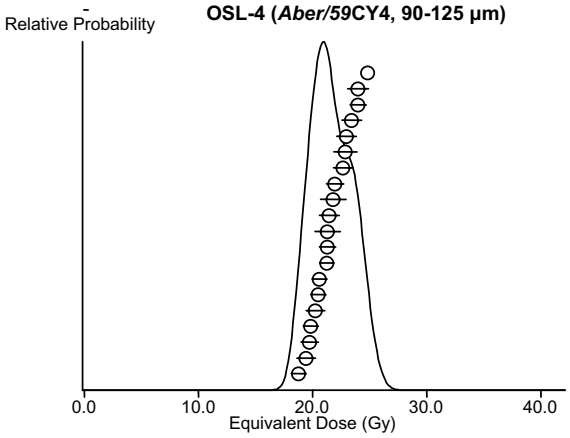

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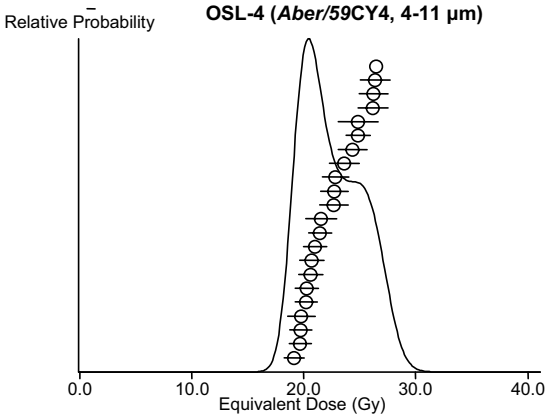

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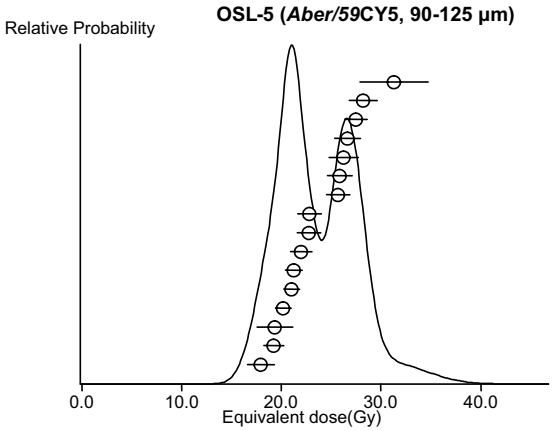

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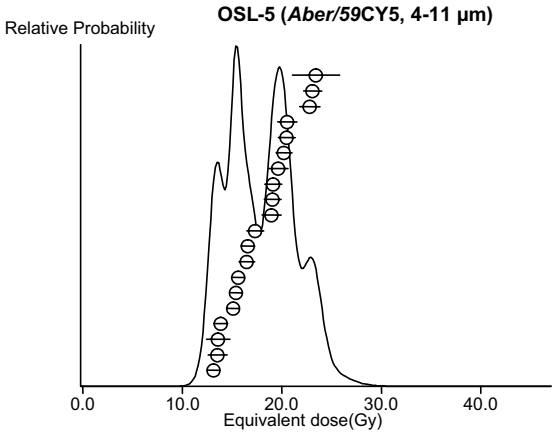
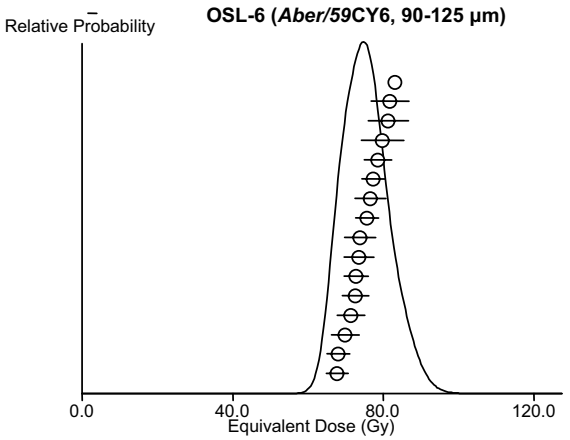


Fig. DR-4 cont.

K



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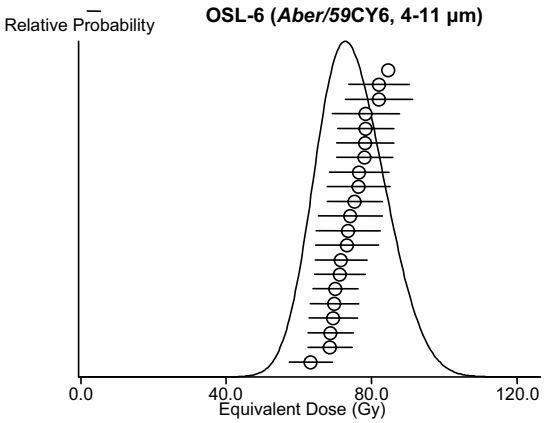

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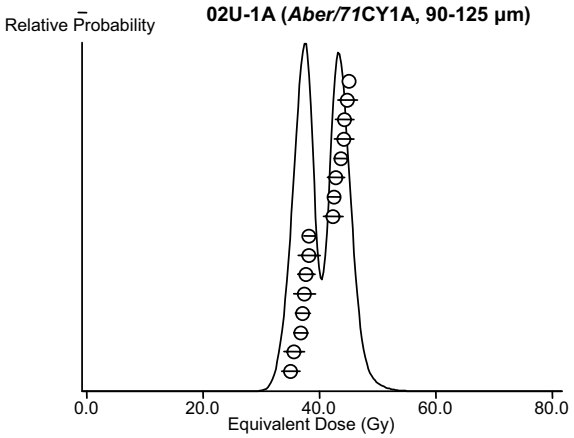

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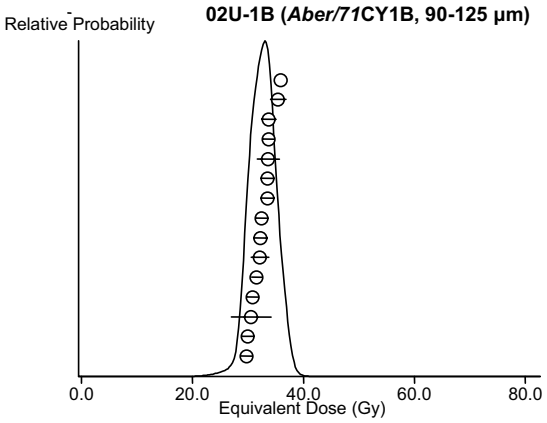

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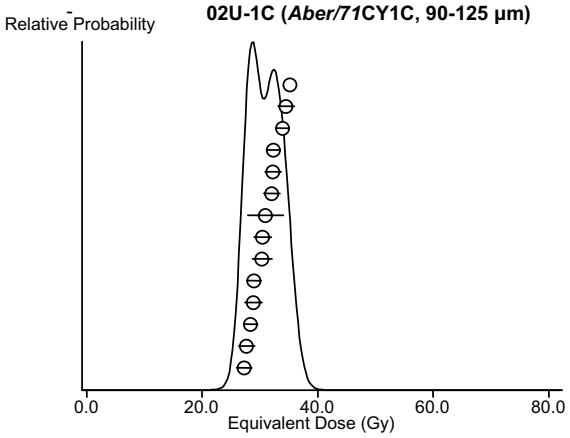

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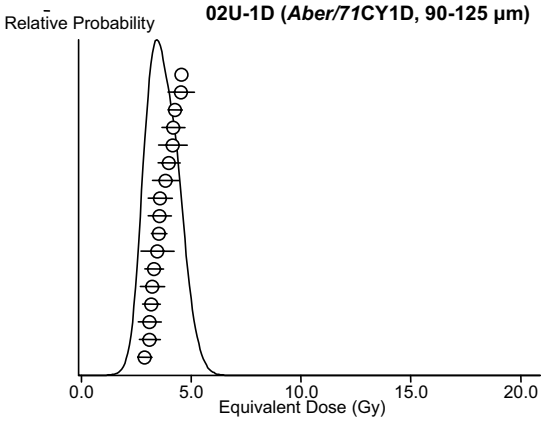
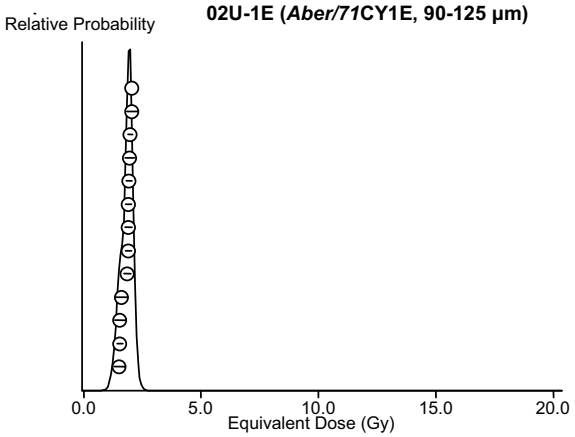


Fig. DR-4 cont.

Q



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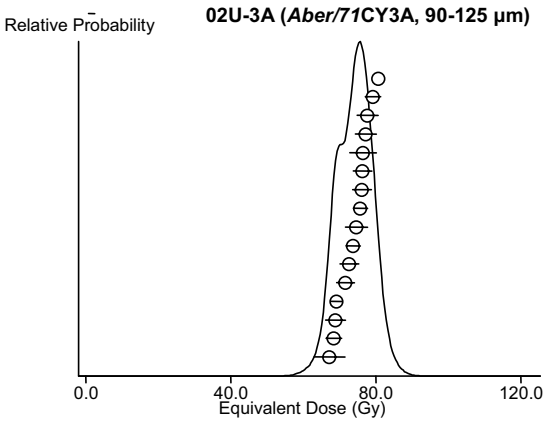

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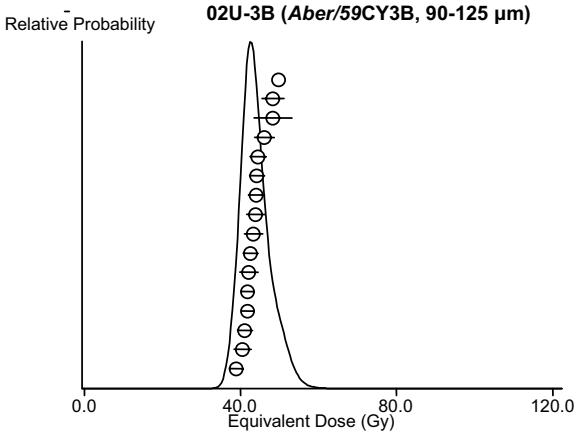

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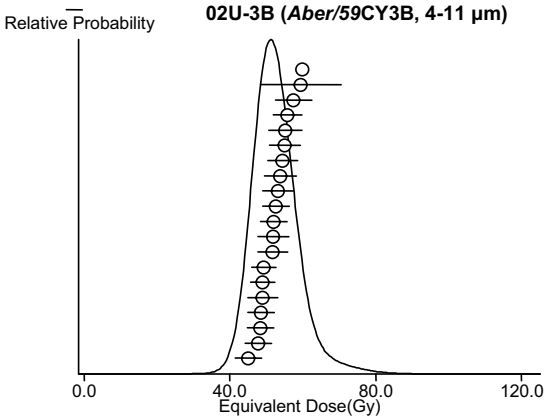

U

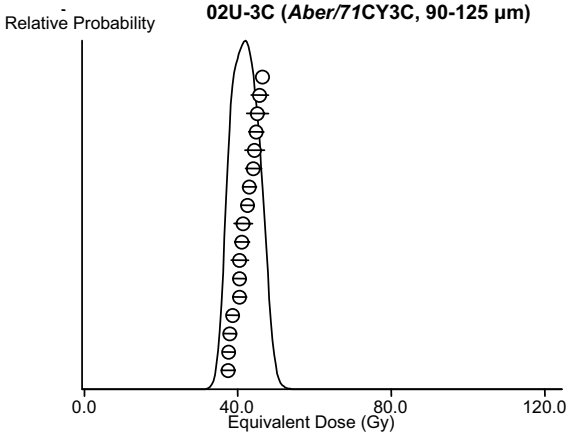

Table DR4. Pollen data (percent) from soil pit VP-2, dune swale, Virginia Park site

Soil horizon	Ak	Bw	Bwk	Btk1b	Btk2b	Bkb
Depth below surface (cm)	0-5	5-14	14-44	44-55	55-85	110-115
Pinaceae:						
Pinus	42.6	23.5	5.4	0.0	2.2	8.6
Picea	2.2	0.8	0.4	0.0	0.4	0.4
Juniperus	11.7	7.8	2.7	0.0	0.0	1.1
cf. *Tamarix*	0.0	0.4	0.0	0.0	0.0	0.0
Ephedra	1.8	2.9	0.9	1.4	1.4	0.8
Poaceae	4.5	4.9	6.3	7.3	5.0	7.5
Chenopodiaceae:						
Cheno-Am[#] undifferentiated	20.2	38.3	66.5	76.3	55.4	45.5
Sarcobatus	1.3	0.0	0.9	0.0	0.0	0.4
Asteraceae:						
Tubuliflorae undifferentiated	2.2	7.0	1.3	2.7	2.2	1.5
Artemisia	4.0	4.1	3.6	1.4	4.7	8.3
Low-spine	0.0	1.2	1.3	0.5	0.4	1.1
Opuntia	1.3	0.0	0.4	0.9	0.4	1.9
Sphaeralcea	0.0	0.0	0.0	0.0	0.4	0.0
Brassicaceae	0.0	0.0	0.0	0.5	0.0	0.0
Unknown	0.9	2.5	0.9	0.9	4.0	2.6
Broken	0.0	0.0	0.9	0.0	2.9	2.3
Crumpled	3.6	0.8	4.5	4.6	4.0	6.4
Degraded	2.7	5.3	2.2	2.3	15.5	9.8
Corroded	0.4	0.0	1.3	0.0	0.0	0.0
Hidden	0.4	0.4	0.4	1.4	1.4	1.9

[#] All samples contained aggregates of Cheno-Am pollen grains