Supplementary Information

Article title: Abrupt Fen-Bog Transition Across Southern Patagonia: Timing, Causes, and Impacts on Carbon Sequestration

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Figure S1. Detailed maps of southern Patagonia showing site location and site name. (Top) Mainland of southern Patagonia; (Bottom) Tierra del Fuego.

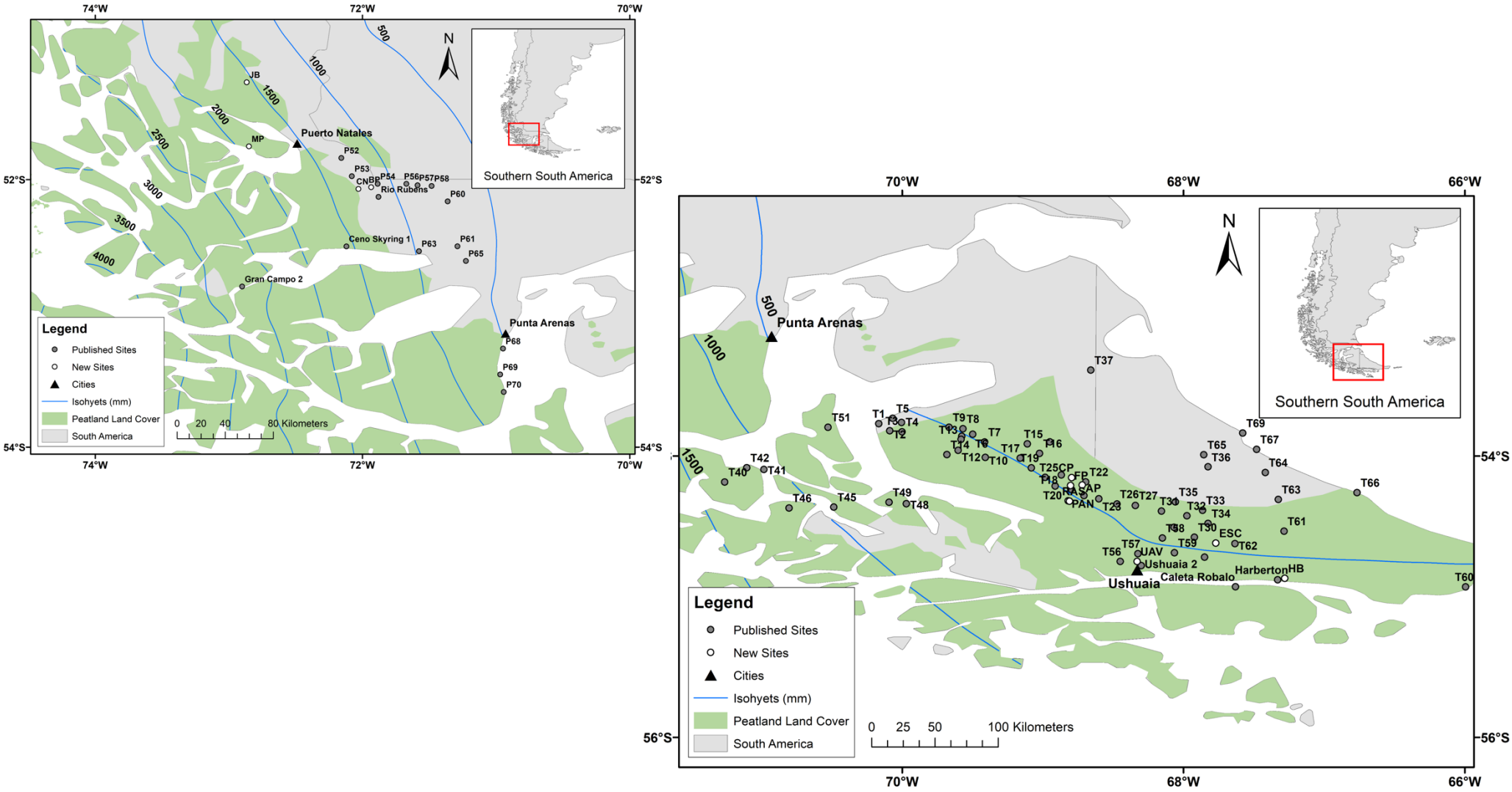
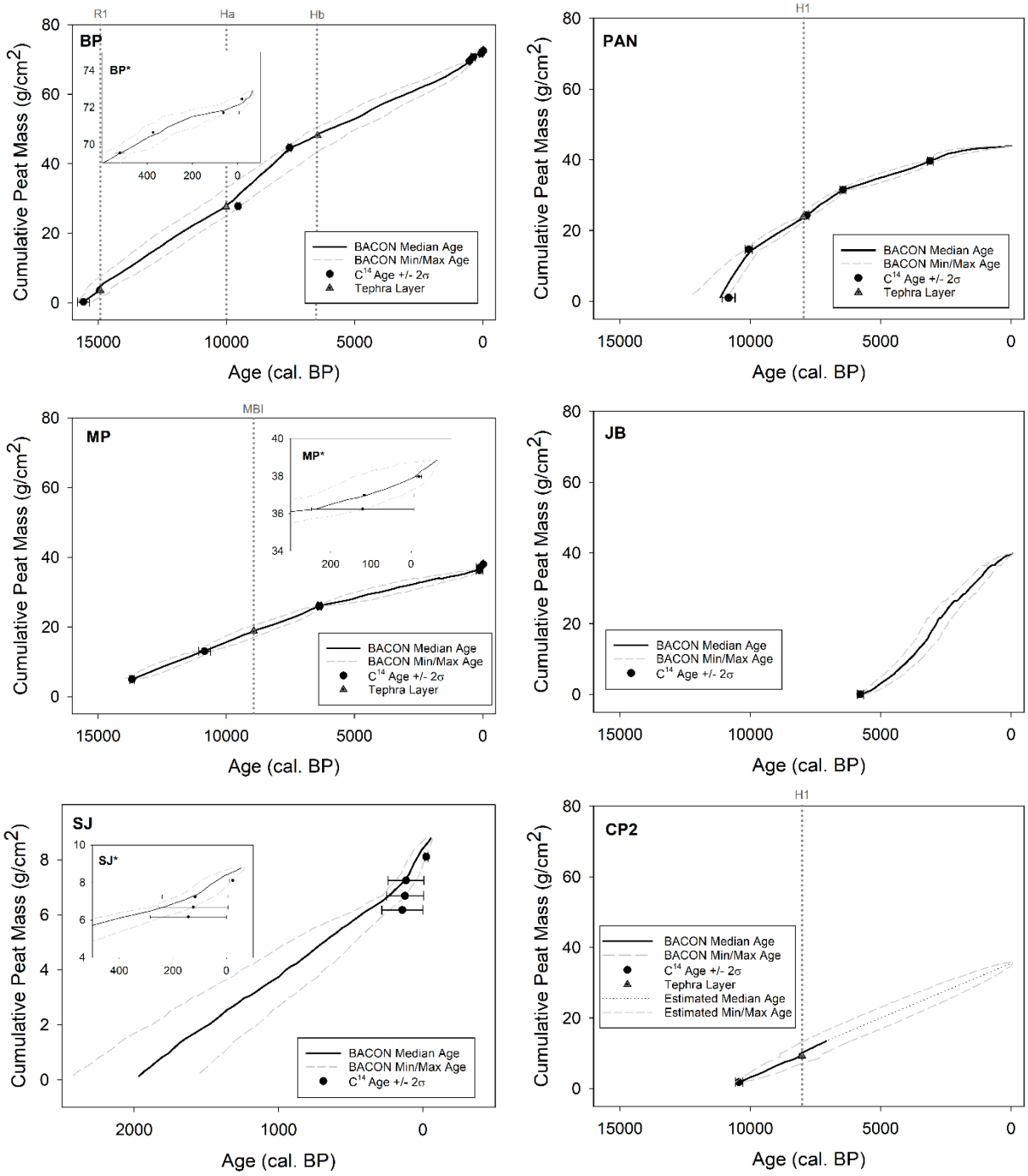
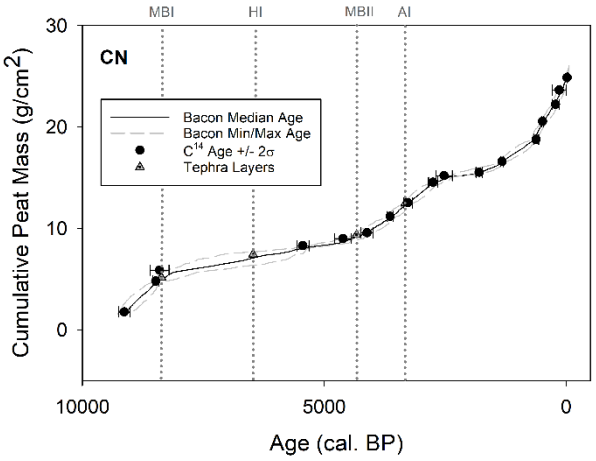
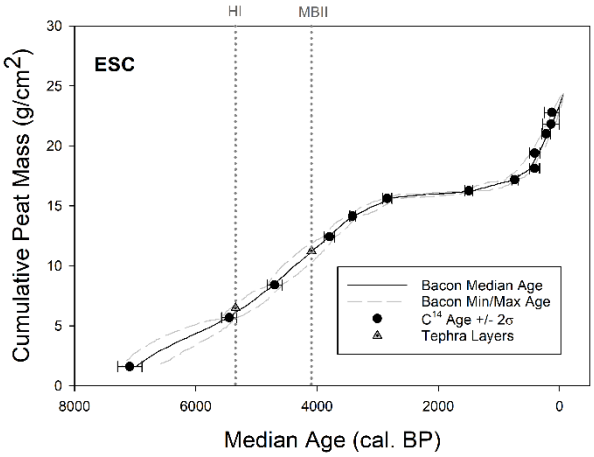
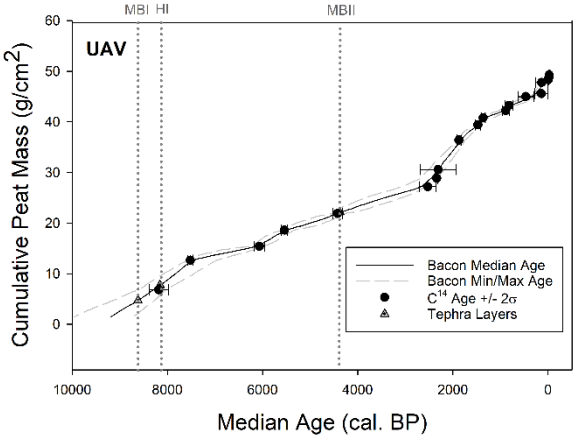


Figure S2. Age-depth models for the new cores from southern Patagonia.




MBI
HI
MBII
AI
CN
Bacon Median Age
Bacon Min/Max Age
C14 Age +/- 2σ
Tephra Layers
Cumulative Peat Mass (g/cm2)
Age (cal. BP)


HI
MBII
ESC
Bacon Median Age
Bacon Min/Max Age
C14 Age +/- 2σ
Tephra Layers
Cumulative Peat Mass (g/cm2)
Median Age (cal. BP)


MBI
HI
MBII
UAV
Bacon Median Age
Bacon Min/Max Age
C14 Age +/- 2σ
Tephra Layers
Cumulative Peat Mass (g/cm2)
Median Age (cal. BP)

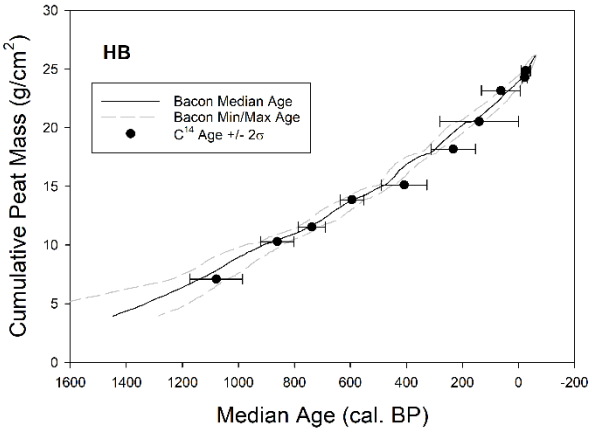
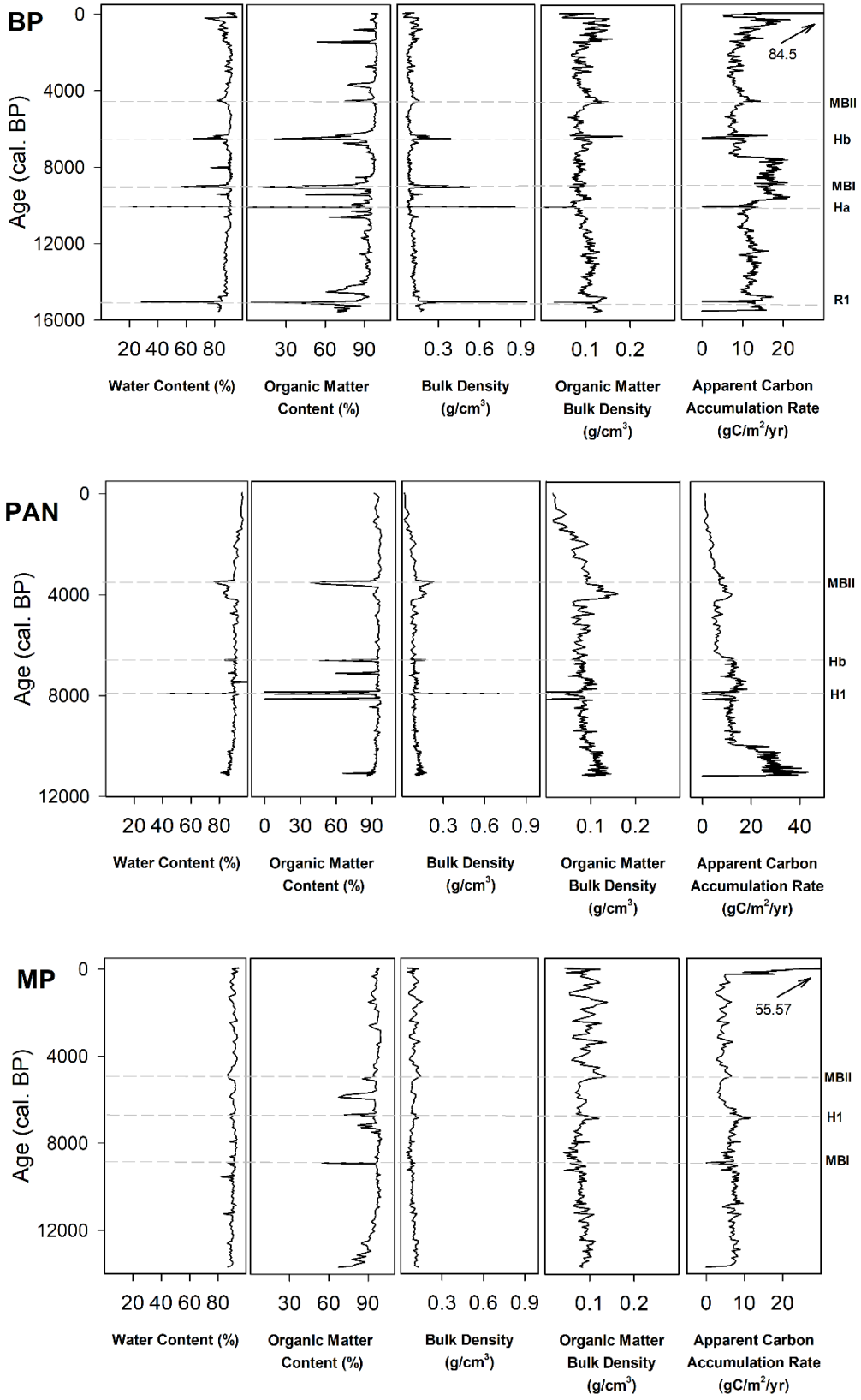
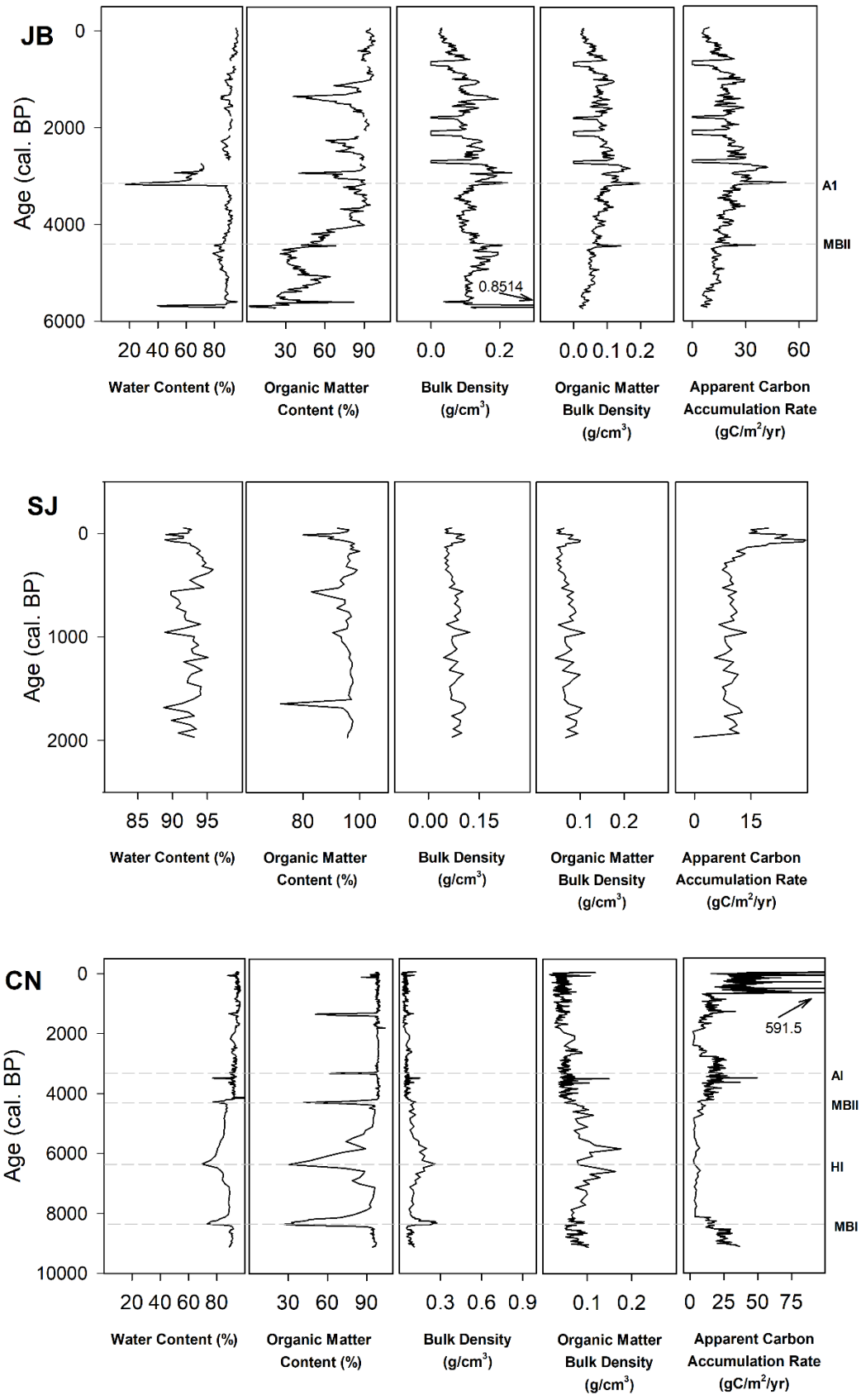
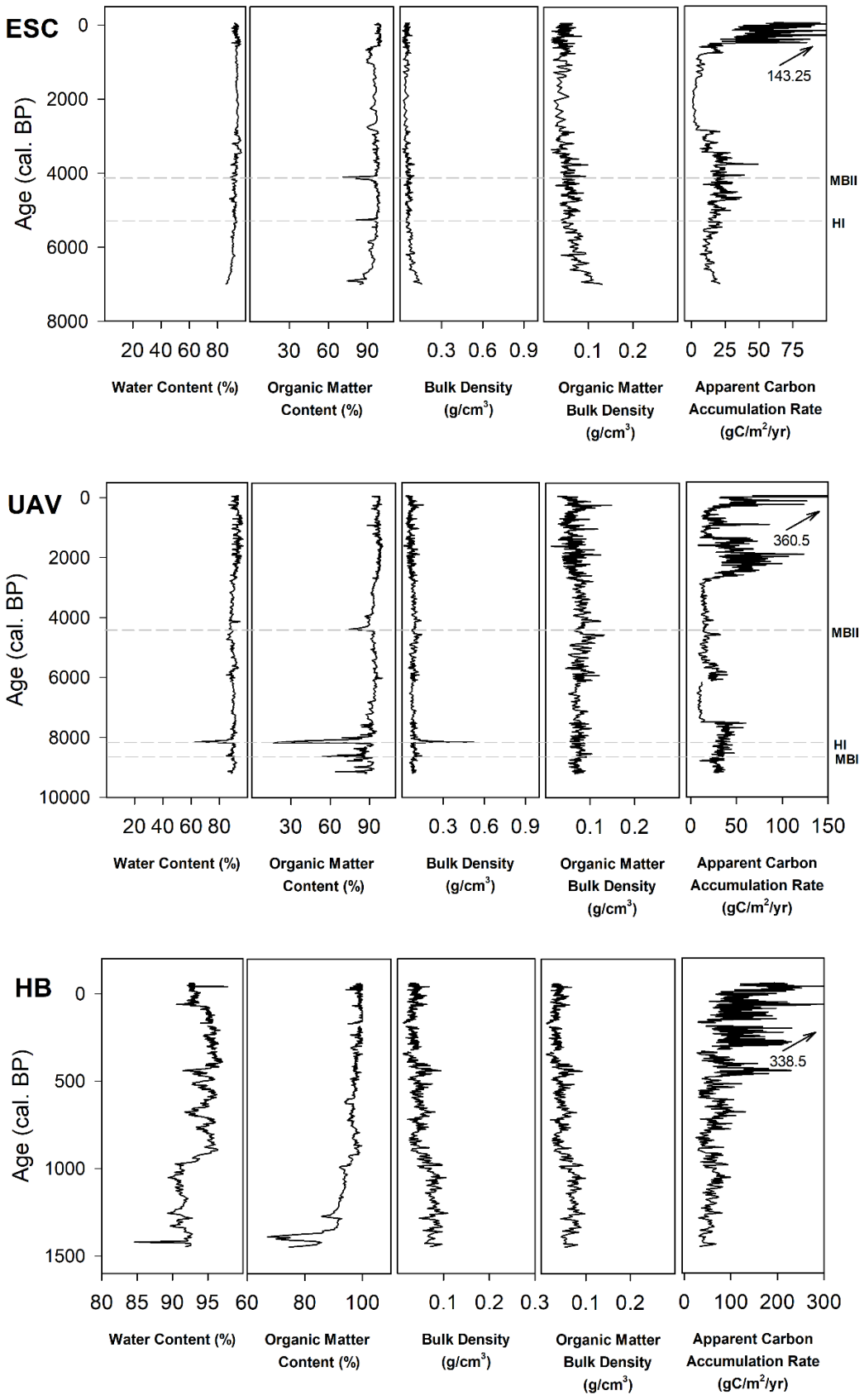

HB
Bacon Median Age
Bacon Min/Max Age
C14 Age +/- 2σ
Cumulative Peat Mass (g/cm2)
Median Age (cal. BP)

Figure S3. Geochemical results for the new cores from southern Patagonia.




JB
Age (cal. BP)
0
2000
4000
6000
A1
MBII
0.8514
20 40 60 80
30 60 90
0.0 0.2
0.0 0.1 0.2
0 30 60
Water Content (%)
Organic Matter Content (%)
Bulk Density (g/cm3)
Organic Matter Bulk Density (g/cm3)
Apparent Carbon Accumulation Rate (gC/m2/yr)
SJ
Age (cal. BP)
0
1000
2000
85 90 95
80 100
0.00 0.15
0.1 0.2
0 15
Water Content (%)
Organic Matter Content (%)
Bulk Density (g/cm3)
Organic Matter Bulk Density (g/cm3)
Apparent Carbon Accumulation Rate (gC/m2/yr)
CN
Age (cal. BP)
0
2000
4000
6000
8000
10000
591.5
AI
MBII
HI
MBI
20 40 60 80
30 60 90
0.3 0.6 0.9
0.1 0.2
0 25 50 75
Water Content (%)
Organic Matter Content (%)
Bulk Density (g/cm3)
Organic Matter Bulk Density (g/cm3)
Apparent Carbon Accumulation Rate (gC/m2/yr)


ESC
Age (cal. BP)
0
2000
4000
6000
8000
143.25
MBII
HI
20 40 60 80
Water Content (%)
30 60 90
Organic Matter Content (%)
0.3 0.6 0.9
Bulk Density (g/cm3)
0.1 0.2
Organic Matter Bulk Density (g/cm3)
0 25 50 75
Apparent Carbon Accumulation Rate (gC/m2/yr)
UAV
Age (cal. BP)
0
2000
4000
6000
8000
10000
360.5
MBII
HI
MBI
20 40 60 80
Water Content (%)
30 60 90
Organic Matter Content (%)
0.3 0.6 0.9
Bulk Density (g/cm3)
0.1 0.2
Organic Matter Bulk Density (g/cm3)
0 50 100 150
Apparent Carbon Accumulation Rate (gC/m2/yr)
HB
Age (cal. BP)
0
500
1000
1500
338.5
80 85 90 95
Water Content (%)
60 80 100
Organic Matter Content (%)
0.1 0.2 0.3
Bulk Density (g/cm3)
0.1 0.2
Organic Matter Bulk Density (g/cm3)
0 100 200 300
Apparent Carbon Accumulation Rate (gC/m2/yr)

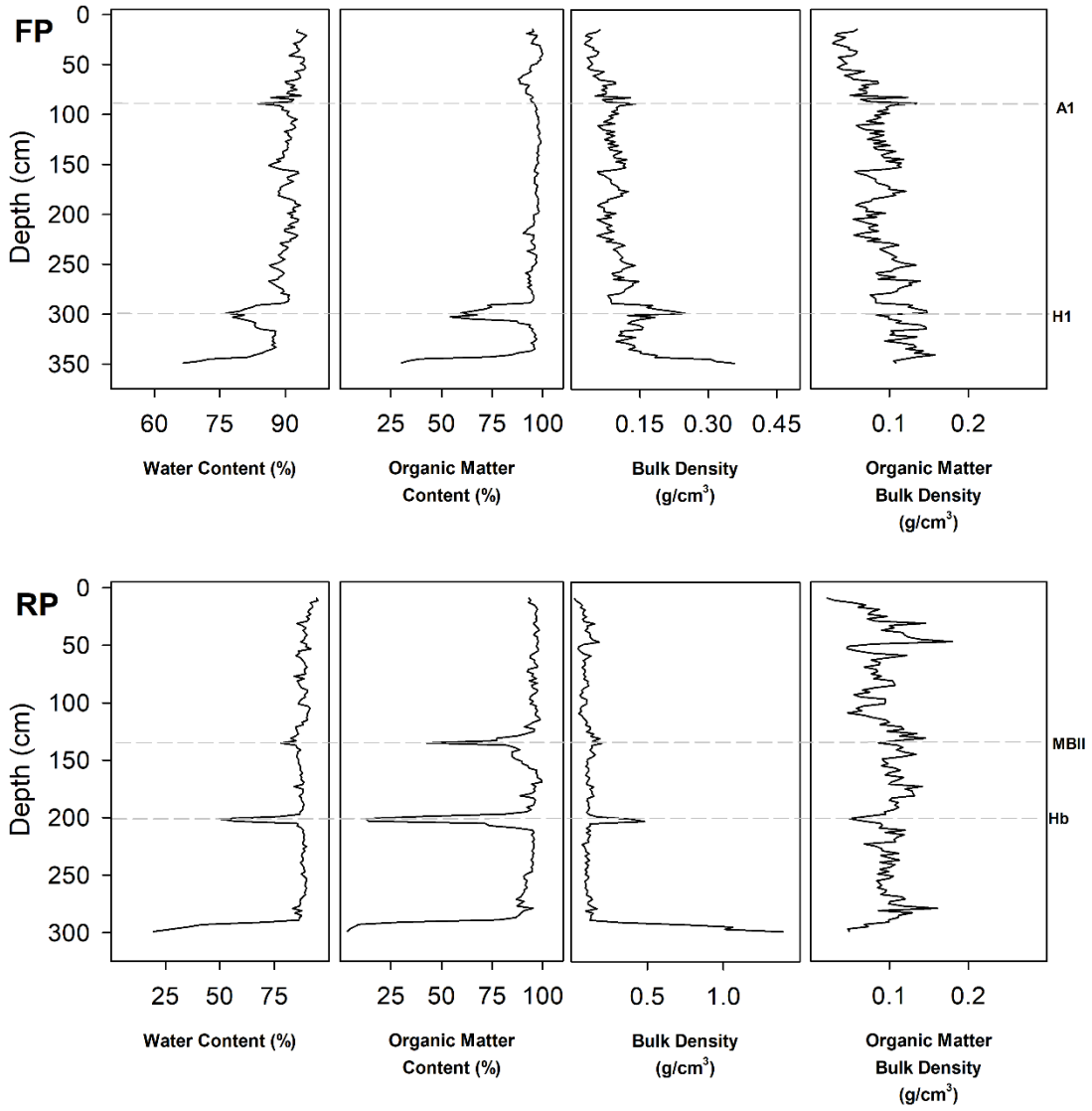
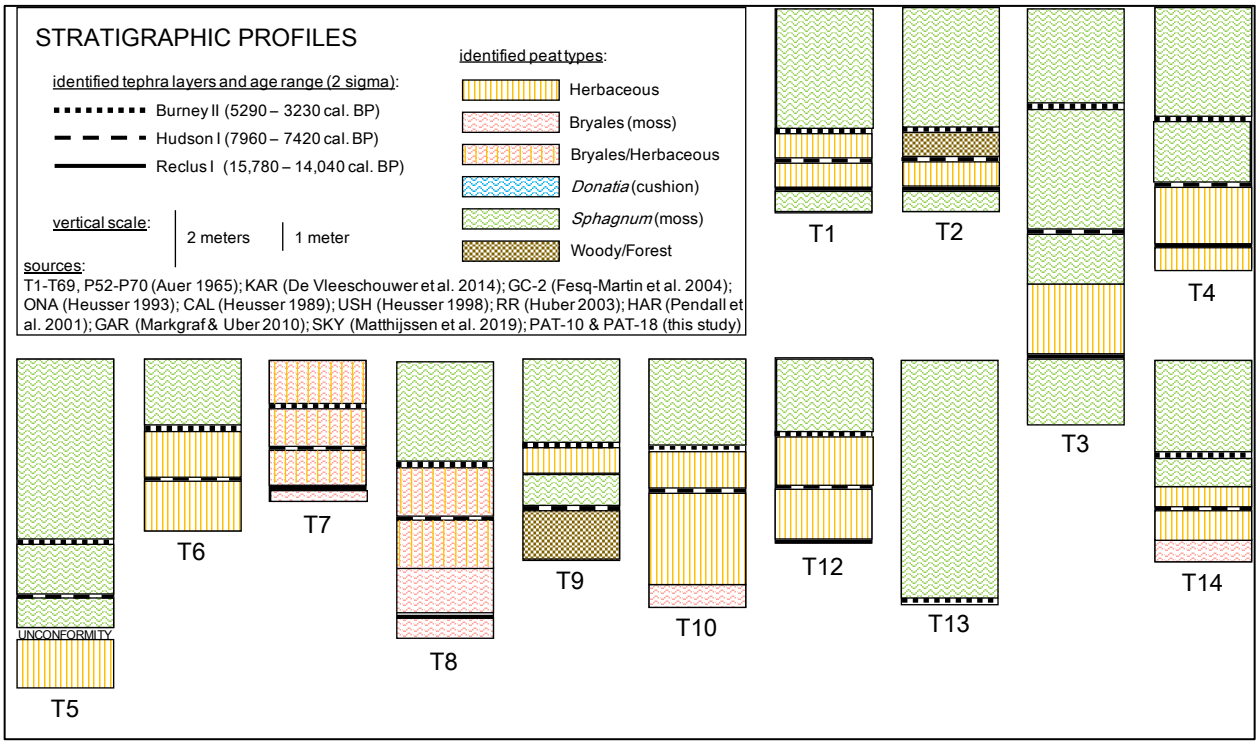
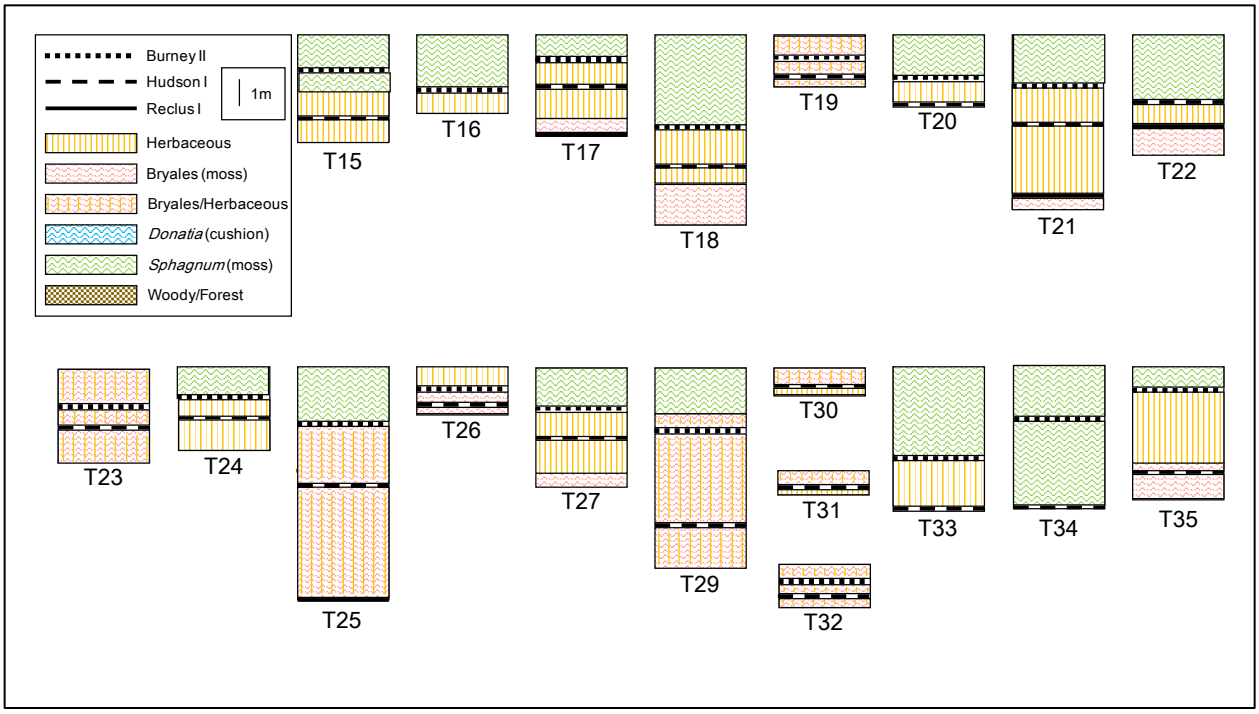
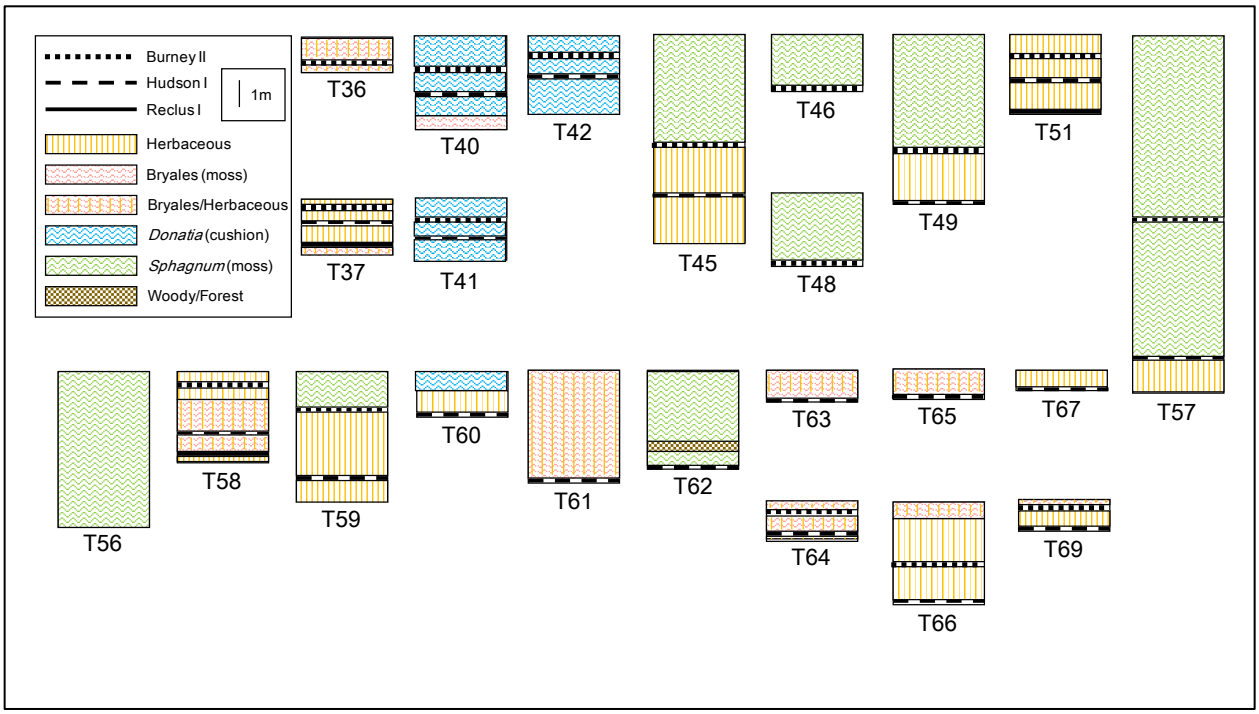

FP
Depth (cm)
0
50
100
150
200
250
300
350
A1
H1
60
75
90
Water Content (%)
25
50
75
100
Organic Matter Content (%)
0.15
0.30
0.45
Bulk Density (g/cm3)
0.1
0.2
Organic Matter Bulk Density (g/cm3)
RP
Depth (cm)
0
50
100
150
200
250
300
MBII
Hb
25
50
75
Water Content (%)
25
50
75
100
Organic Matter Content (%)
0.5
1.0
Bulk Density (g/cm3)
0.1
0.2
Organic Matter Bulk Density (g/cm3)

Figure S4. Peat stratigraphic profiles for the 78 peat profiles from the literature review that were included in this study. The sketches are true to scale. The other 12 peat profiles (our new sites) can be found in the main text (**Figure 3**).






Burney II
Hudson I
Reclus I
1m
Herbaceous
Bryales (moss)
Bryales/Herbaceous
Donatia (cushion)
Sphagnum (moss)
Woody/Forest
T36
T40
T42
T46
T51
T37
T41
T45
T48
T49
T57
T56
T58
T59
T60
T61
T62
T63
T65
T67
T64
T66
T69

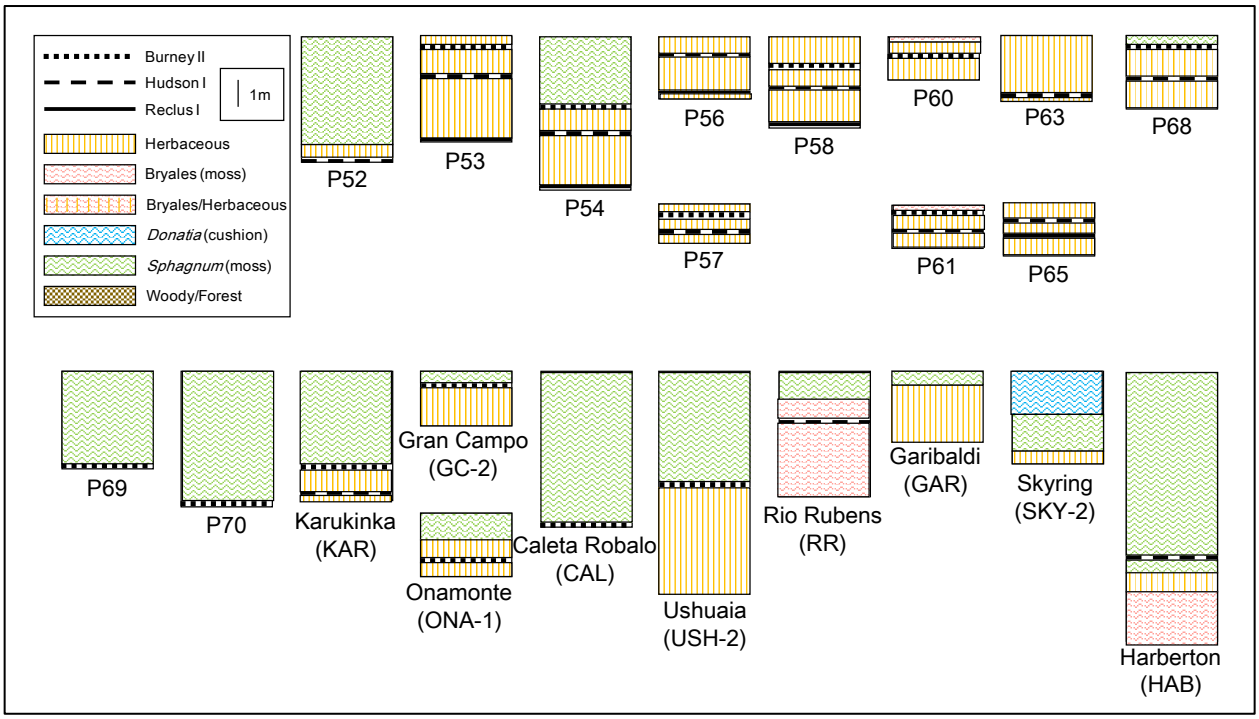

Burney II
Hudson I
Reclus I
1m
Herbaceous
Bryales (moss)
Bryales/Herbaceous
Donatia (cushion)
Sphagnum (moss)
Woody/Forest
P52
P53
P54
P56
P58
P60
P63
P68
P57
P61
P65
P69
P70
Karukinka
(KAR)
Gran Campo
(GC-2)
Onamonte
(ONA-1)
Caleta Robalo
(CAL)
Ushuaia
(USH-2)
Rio Rubens
(RR)
Garibaldi
(GAR)
Skyring
(SKY-2)
Harberton
(HAB)

Table S1. Site information for the new peat cores from southern Patagonia.

Site Name	*Site Code*	*Latitude*	*Longitude*	*Peat Depth (cm)*	*Peat Type*
Beef-Penguin Peatland	BP	-52.057	-71.935	770	Bog
PANs Peatland	PAN	-54.319	-68.82	503	Bog
Mercedes Peatland	MP	-51.752	-72.849	434	Bog
Jen Bog Peatland	JB	-51.273	-72.866	590	Bog
San Juan Peatland	SJ	-53.649	-70.961	125	Bog
El Cura Peatland	CP	-54.154	-68.795	376	Herbaceous
Flarks Peatland	FP	-54.21	-68.803	360	Bog
Rasmussen Peatland	RP	-54.322	-68.81	291	Bog
Cerro Negro Peatland	CN	-52.07	-72.03	446	Bog
Escondido Peatland	ESC	-54.62	-67.77	451	Bog
Upper Andora Valley Peatland	UAV	-54.75	-68.33	715	Bog
Harberton Bog	HB	-54.87	-67.28	520	Bog

Table S2. Radiocarbon dates for the new cores from southern Patagonia.

Core	*Depth (cm)*	*Dated Material*	*^{14}C Age (BP)*	*Probability Range (2sigma cal. yr BP)*	*Median Probability Age +/- 2s (cal. yr BP)*	*Bacon Median Age (cal. yr BP)*	*Laboratory*	*Lab ID (CAMS)*
BP	6-8	brown moss stems	> Modern	(-24) - (-14)	-21 ± -5	-37	LLNL - CAMS	180898
	16-18	*S. magellanicum* stems	95 ± 30	(-6) - 252	88 ± -129	121	LLNL - CAMS	180908
	26-28	*S. magellanicum* stems	330 ± 30	296-451	387 ± 77.5	344	LLNL - CAMS	180893
	36-38	*S. magellanicum* stems	520 ± 30	496-543	518 ± 23.5	519	LLNL - CAMS	180894
	298-300	root-free bulk peat (63-125µm)	6695 ± 30	7463-7586	7532 ± 61.5	7504	LLNL - CAMS	180903
	496-498	root-free bulk peat (63-125µm)	8605 ± 35	9477-9594	9533 ± 58.5	10070	LLNL - CAMS	180900
	768-770	root-free bulk peat (63-125µm)	13065 40	15339-15789	15594 ± 225	15547	LLNL - CAMS	180922
MP	14-16	*S. magellanicum* stems	> Modern	(-26) - (-14)	-24 ± -6	-10	LLNL - CAMS	180907
	24-26	*S. magellanicum* stems	Modern	(-7) - 248	78 ± -127.5	111	LLNL - CAMS	180897
	34-36	*S. magellanicum* stems	Modern	(-7) - 240	56 ± -123.5	237	LLNL - CAMS	180895
	150-152	root-free bulk peat (63-125µm)	5630 ± 30	6300-6437	6362 ± 68.5	6356	LLNL - CAMS	180886
	320-322	root-free bulk peat (63-125µm)	9540 ± 35	10600-11072	10766 ± 236	10853	LLNL - CAMS	180888
	408-410	root-free bulk peat (63-125µm)	11895 ± 35	13567-13759	13664 ± 96	13682	LLNL - CAMS	180890
PAN	66-68	root-free bulk peat (63-125µm)	2995 ± 30	2990-3215	3111 ± 112.5	3095	LLNL - CAMS	180905
	168-170	root-free bulk peat (63-125µm)	5710 ± 30	6323-6549	6448 ± 113	6429	LLNL - CAMS	180902
	258-260	root-free bulk peat (63-125µm)	7045 ± 30	7742-7934	7843 ± 96	7865	LLNL - CAMS	180906
	378-380	root-free bulk peat (63-125µm)	8960 ± 35	9910-10191	10041 ± 140.5	9915	LLNL - CAMS	180901
	501-503	root-free bulk peat (63-125µm)	9540 ± 40	10590-11074	10772 ± 242	11158	LLNL - CAMS	180904
JB	568-570	root-free bulk peat (63-125µm)	5050 ± 30	5651-5892	5740 ± 120.5	5741	LLNL - CAMS	180891
SJ	12-14	*S. magellanicum* stems	> Modern	(-35) - (-13)	-30 ± -11	36	LLNL - CAMS	180896
	22-25	*S. magellanicum* stems	Modern	(-7) - 240	59 ± 123.5	126	LLNL - CAMS	180899

Core	*Depth (cm)*	*Dated Material*	*^{14}C Age (BP)*	*Probability Range (2sigma, cal. yr BP)*	*Median Age +/- 2sigma (cal. yr BP)*	*Bacon Median Age (cal. yr BP)*	*Laboratory*	*Lab ID*
	33-35	*S. magellanicum* stems	115 ± 30	(-6) - 253	92 ± -129.5	236	LLNL - CAMS	180887
	43-45	*S. magellanicum* stems	190 ± 30	0-285	178 ± 142.5	382	LLNL - CAMS	180892
CP2	374-376	root-free bulk peat (63-125µm)	9305 ± 35	10290-10564	10442 ± 137	10411	LLNL - CAMS	180889
CN	22	Sphagnum stems	-2405 ± 15	(-28.17) - (-13.45)	-26.07 ± 7.36	-21	UCIAMS	97975
	48	*Sphagnum* stems	186 ± 37	0 - 285	165 ± 142.5	99	SUERC	52648
	80	*Sphagnum* stems	220 ± 20	147 - 293	193 ± 73	273	UCIAMS	76272
	120	*Sphagnum magellanicum* stems, branches, leaves	460 ± 15	469 - 508	496 ± 19.5	494	UCIAMS	79135
	160	*Sphagnum* & brown moss stems	730 ± 20	568 - 671	648 ± 51.5	665	UCIAMS	76273
	212	1 sedge seed, *Sph*. & brown moss stems	1465 ± 15	1299 - 1350	1315 ± 25.5	1331	UCIAMS	79136
	240	bulk peat without roots & herbs	1900 ± 20	1729 - 1866	1789 ± 68.5	1832	UCIAMS	77132
	246	*Sphagnum* stems	2465 ± 15	2353 - 2694	2445 ± 170.5	2433	UCIAMS	97974
	256	*Sphagnum* stems	2730 ± 15	2654 - 2845	2785 ± 95.5	2782	UCIAMS	79140
	296	*Sphagnum* stems	3100 ± 15	3181 - 3356	3274 ± 87.5	3300	UCIAMS	82710
	320	fine bulk peat (63-125µm) + *Sphagnum* leaves	3435 ± 15	3575 - 3695	3636 ± 60	3648	UCIAMS	77133
	350	*Sphagnum* stems	3805 ± 20	3995 - 4236	4125 ± 120.5	4206	UCIAMS	77134
	358	fine bulk peat (63-125µm)	4100 ± 15	4437 - 4784	4533 ± 173.5	4585	UCIAMS	79139
	366	fine bulk peat (63-125µm)	4720 ± 20	5318 - 5571	5397 ± 126.5	5470	UCIAMS	79137
	390	fine bulk peat (63-125µm)	7680 ± 90	8210 - 8601	8444 ± 195.5	8120	UCIAMS	79138
	406	fine bulk peat (63-125 µm) + sedge stem bases	7745 ± 25	8414 - 8550	8485 ± 68	8481	UCIAMS	77135
	446	fine bulk peat (63-125µm)	8215 ± 20	9019 - 9252	9102 ± 116.5	9111	UCIAMS	77136
ESC	33.5	*Sphagnum* stems	125 ± 15	2 - 251	72 ± 124.5	57	UCIAMS	94435
	53.5	*Sphagnum* stems	190 ± 15	0 - 282	211 ± 141	145	UCIAMS	94436

Core	*Depth (cm)*	*Dated Material*	*^{14}C Age (BP)*	*Probability Range (2sigma cal. yr BP)*	*Median Probability Age +/- 2s (cal.yr BP)*	*Bacon Median Age (cal. yr BP)*	*Laboratory*	*Lab ID (CAMS)*
	73.5	*Sphagnum* stems	235 ± 15	152 - 295	194 ± 71.5	202	UCIAMS	94437
	111.5	*Sphagnum* stems and leaves	405 ± 15	329 - 494	455 ± 82.5	352	UCIAMS	97979
	149.5	*Sphagnum* stems	410 ± 15	331 - 495	460 ± 82	487	UCIAMS	94438
	169.5	Brown moss stems	885 ± 20	689 - 791	748 ± 51	766	UCIAMS	112296
	192	Brown moss + *Sphagnum*	1660 ± 20	1430 - 1564	1518 ± 67	1523	UCIAMS	112297
	209.5	*Sphagnum* stems	2785 ± 20	2766 - 2921	2828 ± 77.5	2834	UCIAMS	94439
	245.5	*Sphagnum* stems and leaves	3240 ± 15	3366 - 3459	3418 ± 46.5	3414	UCIAMS	97980
	279.5	*Sphagnum* stems	3570 ± 20	3708 - 3887	3791 ± 89.5	3809	UCIAMS	94440
	349.5	*Sphagnum* stems	4190 ± 15	4578 - 4823	4692 ± 122.5	4723	UCIAMS	94441
	399.5	Brown moss stems + lef fragments	4740 ± 15	5322 - 5576	5393 ± 127	5482	UCIAMS	94442
	450.5	bulk peat (63-125µm)	6250 ± 80	6891 - 7292	7102 ± 200.5	6987	UCIAMS	78212
UAV	20.5	*Sphagnum* stems	-1490 ± 15	(-38.13) - (-10.08)	-26.38 ± 14.025	-34	UCIAMS	126568
	29.5	*Sphagnum* stems	-3365 ± 15	(-21.83) - (-13.95)	-19.60 ± 3.94	-20	UCIAMS	94443
	38.5	*Sphagnum* stems	-215 ± 15	(-7.5) - (-6.26)	-6.84 ± 0.62	34	UCIAMS	126569
	47.5	*Sphagnum* stems	155 ± 15	0 - 266	99 ± 133	85	UCIAMS	94444
	77.5	*Sphagnum* stems	175 ± 15	0 - 277	148 ± 138.5	267	UCIAMS	88647
	84.5	seeds and leaves	470 ± 90	300 - 628	461 ± 164	355	UCIAMS	126570
	113.5	*Sphagnum* stems	930 ± 15	739 - 897	781 ± 79	776	UCIAMS	82708
	135.5	*Sphagnum* stems	1050 ± 20	818 - 959	927 ± 70.5	946	UCIAMS	88648
	159.5	*Sphagnum magellanicum* stems and branches	1530 ± 15	1319 - 1405	1364 ± 43	1346	UCIAMS	79133
	183.5	*Sphagnum* stems and leaves	1620 ± 15	1418 - 1526	1472 ± 54	1491	UCIAMS	88649
	231.5	*Sphagnum* stems	1965 ± 15	1831 - 1913	1871 ± 41	1853	UCIAMS	82709
	319.5	bulk peat (63-125µm), 2 sedge seeds	2270 ± 110	1930 - 2683	2227 ± 376.5	2312	UCIAMS	79134
	349	brown moss stems and 1 sedge seed	2365 ± 15	2312 - 2360	2344 ± 24	2466	UCIAMS	82704
	373.5	Brown moss stems	2480 ± 20	2356 - 2700	2480 ± 172	2687	UCIAMS	82705
	439.5	Brown moss stems	4020 ± 20	4319 - 4526	4466 ± 103.5	4475	UCIAMS	82707

Core	*Depth (cm)*	*Dated Material*	*^{14}C Age (BP)*	*Probability Range (2sigma cal. yr BP)*	*Median Probability Age +/- 2s (cal. yr BP)*	*Bacon Median Age (cal. yr BP)*	*Laboratory*	*Lab ID (CAMS)*
	479.5	*Sphagnum magellanicum* stems and branches	4865 ± 15	5477 - 5604	5525 ± 63.5	5519	UCIAMS	79141
	519.5	Brown moss stems	5330 ± 20	5950 - 6181	6078 ± 115.5	6142	UCIAMS	89805
	559.5	wood	6670 ± 15	7462 - 7572	7519 ± 55	7496	UCIAMS	97978
	639.5	brown moss stems and1 sedge seed	7410 ± 110	7980 - 8381	8186 ± 200.5	8292	UCIAMS	79142
	714.5	bulk peat (63-125µm)	9480 ± 25	10580 - 10747	10669 ± 83.5	9190	UCIAMS	78207
HB	35.5	*Sphagnum* stems	-1375 ± 15	(-42.39) - (-9.69)	-27.39 ± 16.35	-30	UCIAMS	94445
	51.5	*Sphagnum* stems	-2125 ± 15	(-32.21) - (-13.31)	-28.38 ± 9.45	-13	UCIAMS	94446
	79.5	fresh-looking *Sphagnum magellanicum*	65 ± 15	(-7) - 132	23.97 ± 69.5	38	UCIAMS	77124
	158.5	fresh-looking *Sphagnum magellanicum*	185 ± 15	0 - 280	212 ± 140	168	UCIAMS	77125
	239.5	*Sphagnum magellanicum* stems & branches (+ few leaves)	265 ± 15	154 - 311	292 ± 78.5	298	UCIAMS	77126
	319.5	brown moss + *Vacciminum* leaves	390 ± 15	326 - 489	385 ± 81.5	479	UCIAMS	77127
	349.5	Brown moss stems	650 ± 15	552 - 636	610 ± 42	598	UCIAMS	97976
	398.5	bulk *Sphagnum* leaves	880 ± 15	689 - 786	743 ± 48.5	753	UCIAMS	77128
	429.5	Bulk peat (63-250µm)	995 ± 15	802 - 920	854 ± 59	881	UCIAMS	97977
	479.5	wood & bark	1210 ± 15	985 - 1173	1064 ± 94	1145	UCIAMS	77129
	525.5	sedge stem bases	1985 ± 15	1836 - 1981	1895 ± 72.5	1447	UCIAMS	77131

Table S3. Regional tephrochronology for southern Patagonia. Age ranges were calibrated using the SHCal 13 calibration curve from from the original articles.

AI	***MBII***	***Hb***	***HI***	***MBI***	***Ha***	***RI***	***Reference***
3369 - 2863	5289 - 3234	6544 - 5790	7960 - 7423	10641 - 8183	10550 - 10268	15776 - 14041	Stern 2008
-	4440 - 3800	6544 - 5790	8135 - 7870	10200 - 9690	10760 - 10260	15215 - 14670	Mansilla et al. 2016

Table S4. Peat mass, thickness, carbon density, and other information from all 82 southern Patagonian peatlands. Peat thickness (in cm) was obtained from published papers and from measurements along our own cores. Peat mass (in g/cm^2) was estimated by multiplying thickness and bulk density, which was assumed to be 0.05 g/cm^3 for *Sphagnum* peat and 0.07 g/cm^3 for non-*Sphagnum* peat. Numbers in red indicate peat sections that only accumulated for a portion of the time slice. For example, peat inception at site T5 occurred at some time between Tephras 1 and 2, such that peat mass between these two intervals, though accurate, cannot be used to estimate peat accumulation rate for the entire time period. Therefore, PCAR (in gC/m^2/yr) was only calculated for intervals during which peat accumulated during the entire time slice.

site name	before Tephra 1 (> 14,900 cal. BP)		Tephra 1 to 2 (14,900 – 7700 cal. BP)			Tephra 2 to 3 (7700 – 4200 cal. BP)			after Tephra 3 (4200 cal. BP – modern)			Total (inception – modern)			Other information	
	thickness cm	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	mass g/cm^2	mass kg C m^2	thickness cm	inception timing	bog? Y/N
T1	70	3.50	85	4.13	5.95	85	8.50	5.95	420	25.00	21.00	36.40	182	660	< Tephra I	Y
T2	70	3.50	85	4.13	5.95	85	8.50	5.95	420	25.00	21.00	36.40	182	660	< Tephra I	Y
T3	230	11.50	420	18.06	26.00	420	30.00	21.00	330	19.64	16.50	75.00	375	1400	< Tephra I	Y
T4	80	5.60	330	16.04	23.10	210	15.00	10.50	380	22.62	19.00	58.20	291	1000	< Tephra I	Y
T5			270		16.90	170	12.14	8.50	630	37.50	31.50	56.90	285	1070	> Tephra I	Y
T6			175		12.25	160	16.00	11.20	230	13.69	11.50	34.95	175	565	> Tephra I	Y
T7	40	2.80	125	6.08	8.75	130	13.00	9.10	150	12.50	10.50	31.15	156	445	< Tephra I	N
T8	70	4.90	330	16.04	23.10	170	17.00	11.90	350	20.83	17.50	57.40	287	920	< Tephra I	Y
T9			170		11.90	200	16.86	11.80	290	17.26	14.50	38.20	191	660	> Tephra I	Y
T10			400		28.00	130	13.00	9.10	300	17.86	15.00	52.10	261	830	> Tephra I	Y
T12			160	7.78	11.20	170	17.00	11.90	250	14.88	12.50	35.60	178	580	Tephra I	Y
T13									830	49.40	41.50	41.50	208	830	Tephra III	Y
T14			180		12.60	170	14.14	9.90	320	19.05	16.00	38.50	193	670	> Tephra I	Y
T15			80		5.60	165	14.36	10.05	120	7.14	6.00	21.65	108	365	> Tephra I	Y
T16						75		5.25	325	19.35	16.25	21.50	108	400	> Tephra II	Y
T17			160	7.78	11.20	75	7.50	5.25	80	4.76	4.00	20.45	102	315	Tephra I	Y
T18			210		14.70	125	12.50	8.75	330	19.64	16.50	39.95	200	665	> Tephra I	Y
T19			30		2.10	50	5.00	3.50	70	5.83	4.90	10.50	53	150	> Tephra I	N
T20						75	7.50	5.25	150	8.93	7.50	12.75	64	225	Tephra II	Y
T21	40	2.80	250	12.15	17.50	125	12.50	8.75	175	10.42	8.75	37.80	189	590	< Tephra I	Y
T22	100	7.00	75		5.25	110	8.70	5.45	130	8.70	6.55	24.25	121	415	< Tephra I	Y
T23			120		8.40	60	6.00	4.20	130	10.83	9.10	21.70	109	310	< Tephra II	N
T24			110		7.70	60	6.00	4.20	100	5.95	5.00	16.90	85	270	< Tephra II	Y
T25			410	19.93	28.70	210	21.00	14.70	210	12.50	10.50	53.90	270	830	Tephra I	Y

site name	before Tephra 1 (> 14,900 cal. BP)		Tephra 1 to 2 (14,900 – 7700 cal. BP)			Tephra 2 to 3 (7700 – 4200 cal. BP)			after Tephra 3 (4200 cal. BP – modern)			Total (inception – modern)			Other information	
	thickness cm	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	mass g/cm^2	mass kg C m^2	thickness cm	inception timing	bog? Y/N
T26			25		1.75	40	4.00	2.80	70	5.83	4.90	9.45	47.25	135	< Tephra II	N
T27			170		11.90	90	9.00	6.30	140	8.33	7.00	25.20	126.00	400	< Tephra II	Y
T29			150		10.50	330	33.00	23.10	225	14.58	12.25	45.85	229.25	705	< Tephra II	Y
T30			25		1.75	25	3.04	1.91	35	3.04	2.29	5.95	29.75	85	< Tephra II	N
T31			20		1.40	20	2.54	1.59	30	2.54	1.91	4.90	24.50	70	< Tephra II	N
T32			30		2.10	30	3.00	2.10	50	4.17	3.50	7.70	38.50	110	< Tephra II	N
T33						170	17.00	11.90	330	19.64	16.50	28.40	142.00	500	Tephra II	Y
T34						310	22.14	15.50	190	11.31	9.50	25.00	125.00	500	Tephra II	Y
T35			90		6.30	290	29.00	20.30	75	4.46	3.75	30.35	151.75	455	< Tephra II	Y
T36						25		1.75	80	6.67	5.60	7.35	36.75	105	< Tephra II	N
T37	25	1.75	60	2.92	4.20	40	4.00	2.80	20	1.67	1.40	10.15	50.75	145	< Tephra I	N
T40			120		8.40	75	7.50	5.25	110	9.17	7.70	21.35	106.75	305	< Tephra II	N
T41			80		5.60	50	5.00	3.50	70	5.83	4.90	14.00	70.00	200	< Tephra II	N
T42			130		9.10	60	6.00	4.20	60	5.00	4.20	17.50	87.50	250	< Tephra II	N
T45			170		11.90	170	17.00	11.90	400	23.81	20.00	43.80	219.00	740	< Tephra II	Y
T46									190	11.31	9.50	9.50	47.50	190	Tephra III	Y
T48									250	14.88	12.50	12.50	62.50	250	Tephra III	Y
T49						70		4.90	420	25.00	21.00	25.90	129.50	490	< Tephra II	Y
T51			100	4.86	7.00	70	7.00	4.90	70	5.83	4.90	16.80	84.00	240	> Tephra I	N
T56						260	21.01	13.18	320	21.01	15.82	29.00	145.00	580	> Tephra II	Y
T57			120		8.40	500	35.71	25.00	670	39.88	33.50	66.90	334.50	1290	< Tephra II	Y
T58	20	1.40	60	2.92	4.20	160	16.00	11.20	30	2.50	2.10	18.90	94.50	270	< Tephra I	N
T59			80		5.60	230	23.00	16.10	130	7.74	6.50	28.20	141.00	440	< Tephra II	Y
T60						155	7.86	4.93		7.86	5.57	10.85	54.25	155	Tephra II	N
T61						400	13.08	12.73		20.29	15.27	28.00	140.00	400	Tephra II	N
T62						314	13.99	8.77		13.99	10.53	19.30	96.50	314	Tephra II	Y
T63						100	5.07	3.18		5.07	3.82	7.00	35.00	100	Tephra II	N
T64			10		0.70	60	6.00	4.20	30	2.50	2.10	7.00	35.00	100	< Tephra I	N
T65						90	4.57	2.86		4.57	3.44	6.30	31.50	90	Tephra II	N

site name	before Tephra 1 (> 14,900 cal. BP)		Tephra 1 to 2 (14,900 – 7700 cal. BP)			Tephra 2 to 3 (7700 – 4200 cal. BP)			after Tephra 3 (4200 cal. BP – modern)			Total (inception – modern)			Other information	
	thickness cm	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	mass g/cm^2	mass kg C m2	thickness cm	inception timing	bog? Y/N
T66						120	12.00	8.40	220	18.33	15.40	23.80	119	340	Tephra II	N
T67						60	3.04	1.91		3.04	2.29	4.20	21	60	Tephra II	N
T69						60	6.00	4.20	20	1.67	1.40	5.60	28	80	Tephra II	N
P52						450	17.03	10.68		17.03	12.82	23.50	117.5	450	Tephra II	Y
P53			220	10.69	15.40	90	9.00	6.30	30	2.50	2.10	23.80	119	340	Tephra I	N
P54			170	8.26	11.90	80	8.00	5.60	250	14.88	12.50	30.00	150	500	< Tephra II	Y
P56	20	1.40	120	5.83	8.40	60	3.04	1.91		3.04	2.29	14.00	70	200	< Tephra I	N
P57			30		2.10	40	4.00	2.80	30	2.50	2.10	7.00	35	100	< Tephra II	N
P58			120	5.83	8.40	60	6.00	4.20	100	8.33	7.00	19.60	98	280	Tephra I	N
P60						80	8.00	5.60	60	5.00	4.20	9.80	49	140	> Tephra II	N
P61			50		3.50	50	5.00	3.50	20	1.67	1.40	8.40	42	120	< Tephra II	N
P63			10		0.70	210	10.65	6.68		10.65	8.02	15.40	77	220	< Tephra II	N
P65	60	4.20	40	1.94	2.80	60	3.04	1.91		3.04	2.29	11.20	56	160	< Tephra I	N
P68			100		7.00	100	10.00	7.00	30	2.50	2.10	16.10	80.5	230	< Tephra II	N
P69									340	20.24	17.00	17.00	85	340	Tephra III	Y
P70									480	28.57	24.00	24.00	120	480	Tephra III	Y
KAR			22		1.54	84	8.40	5.88	344	20.48	17.20	24.62	123.1	450	< Tephra II	Y
GC2			70	7.41	4.90	72	7.20	5.00	42	3.57	2.94	12.84	64.2	184	< Tephra II	N
ONA			19	3.34	1.30	31	3.12	2.20	170	11.78	9.90	13.40	67	220	< Tephra II	Y
CAL									530	31.55	26.50	26.50	132.5	530	Tephra III	Y
USH			250	10.80	17.50	140	14.0	9.80	360	21.43	18.00	45.30	226.5	750	< Tephra II	Y
RR			272	23.80	19.04	98	8.32	5.82	80	4.76	4.00	28.86	144.3	450	< Tephra II	Y
HAR	30	2.10	290	13.47	19.40	310	22.14	15.5	370	22.14	18.5	55.50	277.5	1000	< Tephra I	Y
GAR			65	6.89	4.55	69	7.32	4.83	125	9.23	7.75	17.13	85.65	260	< Tephra II	Y
SKY			136	7.36	7.80	102	8.65	6.06	112	9.33	7.84	21.70	108.5	350	< Tephra II	N
CN			76		3.58	21		1.74	353	21.01	17.65	24.44	122.2	450	< Tephra II	Y
ESC			70		4.90	84	6.97	4.88	300	17.86	15	24.78	123.9	454	< Tephra II	Y
HB									510	30.40	25.54	25.54	127.7	510	> Tephra III	Y
UAV			89		6.23	191	19.10	13.37	435	28.87	24.25	43.85	219.25	715	< Tephra I	Y

site name	before Tephra 1 (> 14,900 cal. BP)		Tephra 1 to 2 (14,900 – 7700 cal. BP)			Tephra 2 to 3 (7700 – 4200 cal. BP)			after Tephra 3 (4200 cal. BP – modern)			Total (inception – modern)			Other information	
	thickness cm	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	thickness cm	PCAR gC/m^2/yr	mass g/cm^2	mass g/cm^2	mass kg C m2	thickness cm	inception timing	bog? Y/N
BP	33	2.31	548		21.40		10.40		189	27.33	9.45	43.56	217.8	770	< Tephra I	Y
MP			229		16.03	56	5.60	3.92	125	25.80	6.25	26.20	131	410	Tephra I	Y
JB						130	13.00	9.10	439	24.26	28.13	37.23	186.15	569	> Tephra I	Y
AP			100		7.00	95	6.79	4.75	170	22.73	8.5	20.25	101.25	365	> Tephra I	Y
CP			84		5.88	124	12.40	8.68	167	21.19	11.69	26.25	131.25	375	> Tephra I	N
FP						250	25.00	17.50	90	19.65	4.5	22.00	110	340	Tephra II	Y
PAN			237		16.59	194	19.40	13.58	71	18.12	3.55	33.72	168.6	502	> Tephra I	Y
RAS			90		6.30	70	7.00	4.90	130	16.58	6.5	17.70	88.5	290	> Tephra I	Y