APPENDIX I

DUNE-SWALE AND SUNKEN FOREST VEGETATIONAL ANALYSIS METHODS AND DATA

The Dune and Swale Community. Three random points were selected on the crest of the primary dune. Transect A passed through a point 8.6 m east of telephone pole #373, transect B passed through a point 7.2 m east of telephone pole #377, and transect C passed through a point 15.8 m east of telephone pole #374.

The Sunken Forest Community. A sampling grid consisting of 1/12 inch squares was laid on top of the aerial photograph of the Sunken Forest area (Fig. 15). The left-hand edge of the grid was positioned 1.5 mm from the east side of the Hopkins House (only structure visible in the northwest corner of the aerial photograph) and the top edge of the grid was on a line extending 2 mm from the north side of the house. From the grid of 24 rows and 57 columns, covering the forest, 35 locations were randomly selected for the analysis of the forest vegetation (Table A-1). The area of the 1/12-inch grid square was equivalent to 103.1 m^2 of actual land surface, while the actual plot laid out in the forest measured 10 × 10 m.

During the course of the vegetational analysis, plots 3, 10, and 14 were found to have been improperly located so that their locations have been corrected in the listing of Table A-1. Plot #11 was measured, but excluded from the forest data because the plot contained no trees, was located outside of the forest community, and would not have been selected in that location if the aerial photograph had been taken when the trees had leafed out rather than in March.

The plots were laid out so that one axis was on a north-south compass line and the other two on a east-west line. The southeast corner of the plot was labeled as Corner 1, while the northeast, northwest, and southwest corners were labeled Corners 2, 3, and 4, respectively (Fig. A-1).

Table A-1. Vegetational analysis—forest plot information

Plot #	Canopy	% Slope	°Aspect	Drainage	Grid row	Location col.	Shrub quarter plot
1	55	—	—		15	29	2
2	85	14	35	5% bog	15	41	4
3	80	17	50		19	6.5	1
4	90	21	111		14	38	1
5	80	17	37	near bog	13	47	4
6	30	10	100		13	33	1
7	80	6	12		19	32	3
8	80	30	49		17	48	3
9	75	—	—		17	51	2
10	80	6	52		12	36.5	4
12	80	21	211		12	49	4
13	90	—	—	10% bog	10	45	2
14	25	4	29		8	48.5	1
15	10	—	—		7	44	1
16	80	6	18		10	54	3
17	85	—	—	3% bog	9	54	2
18	90	6	39	near bog	19	55	2
19	80	21	51		20	13	4
20	90	5	25	15% bog	18	16	4
21	55	4	25	near bog	17	14	3
22	75	6	239		17	19	4
23	90	4	16		17	9	4
24	85	15	50		16	6	3
25	80	21	44		13	5	3
26	55	9	241		15	7	2
27	45	—	—		14	11	1
28	45	—	—		6	2	3
29	15	4	5		1	1	2
30	80	2	165		9	13	2
31	30	6	39		2	21	3
32	4	—	—		5	24	1
33	99	—	—	100% bog	10	22	1
34	75	4	200		12	30	2
35	85	12	43		8	35	1

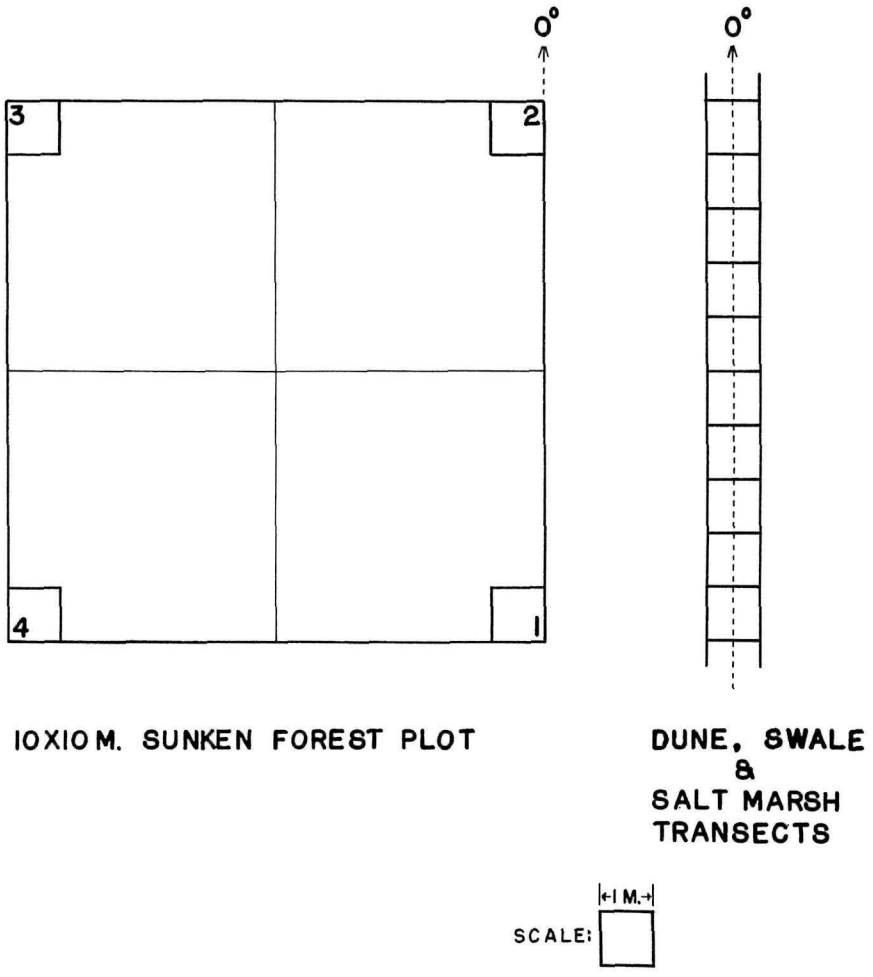

Fig. A-1. Vegetation sampling methods.

Transect A Dune-Swale Community—% Cover

Meter #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ab	8	2	25	30	25	20	45	30	25	50	20	20	15	50	25	25	33	20	33	40	12	15	20	35	25
Ce	1	1			2											*								2	
As																	*	2			3	5			
Laj																								7	10
SSe																									
Pg																									
Pm																									
R																									
Mp																									
Au																									
Rco																									
Ch																									
Qv																									
Lm																									
Acs																									
Rca																									
Ht																									
Cs																									
P																									
Sg																									
Cp																									
An																									
Tb																									
Io																									
Sst																									
Hve																									
Pv																									
Qs																									
Tot	9	3	25	30	27	20	45	30	25	50	20	20	15	50	25	25	33	22	33	40	15	20	20	44	35
BS	91	80	75	65	75	80	55	70	72	45	75	75	85	50	75	70	66	70	55		80	72	75	35	40
(L)						2			5	10	10	10		5	5	16	5	20	20	20	7	10	10	45	45

Tot = Total cover
BS = Bare sand
(L) = Litter

Transect A, *continued*

Meter #	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ab	20	5	10	35	25	10	7	7	8	10	7	3	15	30	25	12	40	30	20	50	35	30	20	18	25
Ce																									
As																									
Laj	2																								
Sse			4		1	5	10	12	8	6	12	4	6				2	3	4	1		1	2	1	2
Pq					3	2	10	3	5	35	10	12	15	12	4	2	2	5					3	15	8
Pm											6	4								5					
R																				8	22	4	2		4
Mp																									
Au																									
Rco																									
Ch																									
Qv																									
Lm																									
Acs																									
Rca																									
Ht																									
Cs																									
P																									
Sg																									
Cp																									
An																									
Tb																									
Io																									
Sst																									
Hve																									
Pv																									
Qs																									
Tot	22	5	14	35	29	17	27	22	21	51	35	23	36	42	29	14	44	38	24	64	57	35	27	34	39
BS	55	65	45	20	30	45	40	25	15	40	5	20	25	30	30	40	20	30	40	5	10	40	25	45	2
(L)	35	35	45	65	50	50	50	65	75	60	85	75	65	55	60	55	55	50	50	50	65	40	55	40	85

Transect A, *continued*

Meter #	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ab	35	30	25	40	25	20	15	10	5	5	7	10	8	5	2	2	3	4	5	4	4		6	16	8
Ce																									
As																									
Laj																									
Sse	4	3	*	1	*		3	4	2	12	7	2	4	1		10	1	1		1	1		5	4	
Pq	5	12	15	15	8	10	10	5	12	10	10	5	6	15	12	12	5	12	15		12	2	9		
Pm							3	4			8	20	2	15	55	15								3	23
R	6	2				4	8		1	2	2	2	3	4	4	2	3								
Mp				1	17	10	4	10	18	15	18	10	25	50	10	20	15	25	12	5	12	22	30		
Au														2	10	5	2	5	40	75	45	10			30
Rco															3	5	8							5	
Ch															4	3	5	2							
Qv																8	50								
Lm																2	5	10	2			3	3		
Acs																2									
Rca																	3								
Ht																		1			2	8	8	4	
Cs																									
P																									
Sg																									
Cp																									
An																									
Tb																									
Io																									
Sst																									
Hve																									
Pv																									
Qs																									
Tot	50	47	40	57	50	44	43	33	38	44	52	49	48	92	100	86	100	60	75	85	76	45	61	32	61
Bs		5	15	10	5	10	20	25	4			3	10					10	15	10	18	25	30	50	35
(L)	80	80	70	80	70	80	50	75	85	85	90	75	75	35	60	70	50	60	20	10	15	40	20	25	30

Transect A, *continued*

Meter #	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ab	4	3	3	4	5	3	*	*		*															
Ce																									
As																									
Laj																									
Sse	1												5									4			
Pq	3	3	1																						
Pm	10		40	45	50	8	1		3																
R		2			3	1																			
Mp	15	40	8	3																					
Au	55	65	30	30	50	75	30	20	35	20															
Rco																									
Ch																									
Qv																									
Lm																									
Acs																									
Rca																									
Ht								2		1	3	4	6	7	7	12	11	1	3						
Cs	1	1																		*	*				
P												*													
Sg																									
Cp																									
An																									
Tb																									
Io																									
Sst																									
Hve																									
Pv																									
Qs																									
Tot	89	114	82	82	108	87	31	22	38	21	3	4	11	7	7	12	11	1	3	0	0	4	0	0	0
BS	12	4	20	22	10	20	65	75	65	80	97	94	89	91	93	88	89	98	96	98	100	96	100	100	100
(L)	10	15	15	28	10	8	10	8	5	1		2								2					

Transect A, *continued*

Meter #	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
Ab																	4	6	8	5	4	6	3	10	5
Ce																									
As																									
Laj																									2
Sse			2	2						2														1	6
Pq																									5
Pm																									
R																						4	25	18	4
Mp																									3
Au																									
Rco																									
Ch																									
Qv																			1		6				
Lm																									
Acs																									
Rca																									
Ht		*									4		2				2	6	20	18	28	30			
Cs																									1
P																									
Sg												*								1		17	15	35	65
Cp																									
An																									
To																									
Io																									
Sst																									
Hve																									
Pv																									
Qs																									
Tot	0	0	2	2	0	0	0	0	0	2	4	0	2	0	0	0	6	12	29	24	38	57	43	64	91
BS	100	100	98	98	100	100	100	100	100	98	95	99	97	100	100	100	93	80	70	60	50	20	30	2	10
(L)											1	1	1				1	8	10	20	15	20	50	75	50

Transect A, *continued*

Meter #	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Abe	6	5	1	1	*									1	1		*		3	3					
Ce																									
As																									
Laj																									
Sse			1																		*	3	2	1	2
Pq	8	10		10	5	8																			
Pm	30	5	1								3	3	4										1		
R																									
Mp	4	17	25	35	5	4	9	8																	
Au	35	20	45	75	80	75	85	90	85	70	55	35	40	60	50	65	45	55	70	60	65	95	85	80	75
Rco																									
Ch		3			5	5	10			2		1	2	1	3	2				2					
Qv																									
Lm																									
Acs																									
Rca																									
Ht																									
Cs																									
P								1			2		2	2		2	6	6	7	5					
Sg	12	8	20	25	12	5	6	2	3	4	2	4			6	4	2	2	4	12	5	10	15	7	2
Cp			4																						
An																					*	1			
To																						1	*	1	1
Io																								2	10
Sst																									
Hve																									
Pv																									
Qs																									
Tot	95	72	97	146	107	97	110	101	88	76	62	43	48	64	60	73	53	63	84	82	70	110	103	91	90
Bs	5	10						2	7	5	8	25	12	4	10		7	4	1	4					
(L)	40	55	40	10	5	25	5		5	30	35	35		35	35	40	40	45	30	35	30	5	10	12	15

Transect A, *continued*

Meter #	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
Ab																									
Ce																									
As																									
Lai																									
Sse																									
Pq	3	3	1	8	3	8	7	5	5	2	5	10	17	20	6	3	3	8	*			2			
Pm																									
R	2		1				2		2	1						1					6	10	2	2	
Mp	6	9	3	5	7	4	9	1				5	5				6	5	9	11	4				
Au	85	80	85	90	90	75	75	70	65	60	75	80	80	90	75	80	75	80	80	70	50	35	30	70	65
Rco											2	1	10	7	3										
Ch																	3				3	4	3	3	
Qv																									
Lm																									
Acs																									
Rca																									
Ht																									3
Cs																									
P									3											1			1	2	
Sg	2	3	8	6	4	9	4	8	15	20	10	35	22	18	8	2	2	6	8	4	6	5	5	2	2
Cp			2					1														1			
An	4	6	5	2	5	4	7	8	1	2	7	4	4		3	2	5	12	4	4	8	4	4	3	5
To	*					1	1								1	1			1			*			
Io	1	2				8																			
Sst	1				1	2	3	*									*	*	3	4	4			2	3
Hve										4	*							*	1		2	1	1		
Pv															16	13	6								
Qs																					15	50	60		
Tot	104	103	105	111	110	111	108	93	91	89	99	135	138	135	112	102	100	111	106	94	98	112	106	84	78
BS		2																						10	3
(L)	10	5	8	5	2	25	12	10	20	15	15	10	5	8		2	3	6	3	20	20	20	15	10	25

Transect B Dune-Swale Community—% Cover

Meter #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ab	20	35	50	22	8	55	12	10	10	4	35	50	35	35	28	7	50	40	45	35	40	45	40	40	30
Ep								*	*	*															
Ce													*	*	*										
Sse														2					1	8	2	1	2		3
Pm																4	16	15					1		3
Rv																									
Pq																									
Mp																									
Io																									
Lm																									
P																									
Ht																									
Aca																									
Cs																									
Par																									
Au																									
Cr																									
Aaa																									
Lc																									
Sg																									
Cp																									
Ch																									
Paq																									
Pr																									
Sas																									
Rco																									
An																									
Tot	20	35	50	22	8	55	12	10	10	4	35	50	35	37	28	11	66	55	46	43	42	46	43	40	36
BS	80	65	50	78	92	45	75	82	85	90	45	30	50	45	55	88	30	20	15	15	25	28	35	35	25
(L)	7	10	1			10	15	18	6	10	25	25	25	30	25	-2	25	60	45	55	55	45	45	50	45

Transect B, *continued*

Meter #	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ab	35	28	15	22	16	5	2	5	8	5	12	10	4	10	5	4	1	1	12	15	15	3	1	*	
Ep																									
Ce																									
Sse	2		3	4	2	8	10	15	4	2	1	2	4	6	20	6	2		2	15	3	4		4	1
Pm		2	18	30	65	65	55	45	38	65	30	18	15	22	28	30	7	1	55	40	50	8	2		
Rv				15		10			4		12														
Pq						10	5							7	2	3			1	3	2	8			
Mp											1	40	35	35	10	3	1		1		3	7			
Io																5	90	98	28						
Lm																						6	10		2
Io																							*	2	r
Lm																								3	1
P																									
Ht																									
Aca																									
Cs																									
Par																									
Au																									
Cr																									
Aaa																									
Lc																									
Sg																									
Cp																									
Ch																									
Paq																									
Pr																									
Sas																									
Rco																									
An																									
Tot	37	30	36	71	83	98	72	65	54	72	56	70	58	80	65	51	101	100	99	73	73	36	13	9	5
BS	40	35	40	5	15	35	40	40	5	10	40	15		2	20	3				5	15	25	70	91	88
(L)	35	50	45	35	20	10	10	15	50	20	12	20	55	50	45	55	3	2	25	30	20	40	18		7

Transect B, *continued*

Meter #	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ab													1	2	4	4	8	3	6	2	4	4	8	5	2
Ep																									
Ce																									
Sse	2	3	1	2	2	*	4			3	3	2	3	4	2		1		5		4	1		2	2
Pm																									
Rv																									
Pq																									
Mp																									
Io																									
Lm				*	*										8	3				*					
P		2	1	*	1	1	*	*	1	*	5	1	*	*	*	2	2	1	*						
Ht	4	3	4	6	3	1	6	9	3	5	1	3	2	3		4	12	15	3	6	3	7	3	6	10
Aca						*		*		1			1												
Cs																									
Par																	2								
Au																	*					25	75	30	*
Cv									1																
Aaa																									
Lc																									
Sg																									
Cp																									
Ch																									
Paq																									
Pr																									
Sas																									
Rco																									
An																									
Tot	6	8	6	8	6	2	10	9	5	9	9	6	7	9	14	13	25	19	14	8	11	37	86	43	14
BS	84	87	84	83	88	92	84	80	89	86	91	90	81	81	71	70	70	65	80	86	85	60	15	50	65
(L)	10	5	10	8	6	5	6	10	6	5		4	12	10	15	22	10	25	15	6	4	6	5	8	22

Transect B, *continued*

Meter #	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ab	3	7	10	4	3	3	4	2	3	6	12	9	6	2		2	4	10	25	12	5	10	7	18	8
Ep																									
Ce																									
Sse		1		1	2					3	1	4					3						1	3	
Pm																		*							
Rv																									
Pq																									
Mp																									
Io																									
Lm	*																					*		*	
P																									
Ht	6	5	*	1	6	6	7	13	8	10	2						1	2		6	4	3	14	5	13
Aca																						*	*		
Cs																									
Par																									
Au	*	12	65	50	12												1	5	22	5					
Cv																									
Aaa																									
Lc																									
Sg																									
Cp																									
Cj																									
Paq																									
Pr																									
Sas																									
Rco																									
An																									
Tot	9	25	75	56	23	9	11	15	11	19	15	13	6	2	0	2.	9	17	47	23	9	16	22	26	21
BS	76	70	15	30	70	61	80	80	85	79	85	85	94	98	100	98	88	78	40	55	70	65	60	60	45
(L)	15	10	15	20	6	30	10	7	4	2		3					3	5	15	25	25	20	20	15	35

Transect B, *continued*

Meter #	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
Ab	6	7	3	2	4	1																			
Ep																									
Ce																									
Sse	3		2		1																				
Pm		1	2	5	8	7	18			1															
Rv																									
Pq																									
Mp																									
Io																									
Lm																									
P	2		1					*													1	1			
Ht	4	9	10	2									1			1	*			1	3		1	3	1
Aca																									
Cs																									
Par									*													*			
Au		1	30	75	80	85	90	60	40	22	60	13	35	70	75	80	60	35	*	6	45	40	85	85	85
Cv								1	*													*			
Aaa					9	4	1			*	1														
Lc						2																			
Sg																									
Cp																									
Ch																									
Paq																									
Pr																									
Sas																									
Rco																									
An																									
Tot	15	18	48	84	102	99	109	61	40	23	61	13	36	70	75	81	60	35	0	7	49	41	86	88	86
BS	80	75	50	15	5	3	7	40	55	65	40	82	55	22	15	5	20	45	100	88	40	50	7	12	10
(L)	5	10	7	10	5	10	2	10	22	18	5	5	10	12	10	15	20	20		5	5	5	7	4	5

Transect B, *continued*

Meter #	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145
Ab		1			3	2	4	1												
Ep																				
Ce																				
Sse					2	4	4													
Pm					15	25	12	20	6	1		2	1							
Rv																				
Pq																			10	18
Mp							1												28	21
Io																				
Lm				5		1	1	2												
P					*															
Ht	1	18	6	4	8				2											
Aca																				
Cs																				
Par																				
Au	70	28	4		2	8	11	50	50	1	3	18	50	95	90	95	80	33	28	5
Cv				1		1						1								
Aaa								1	2											
Lc																				
Sg		1	7	14	12	15	15	8					2	15	12	10	20	28	13	65
Cp															1					
Ch															1	15	6			
Paq																	1		1	3
Pr																	10	30	12	2
Sas																		3		12
Rco																		2	3	
An																			1	
Tot	71	48	17	24	42	56	48	82	60	2	3	21	53	110	104	120	117	96	96	126
BS	26	45	80	75	40	25	35	15	30	98	97	80						2	4	8
(L)	6	5	6	8	25	25	30	10	10					5	3			5	25	10

Transect C Dune–Swale Community – % Cover

Meter #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Ab	15	15	40	40	45	45	45	25	35	25	35	28	8	7	15	18	30	27	15	20	35	18	45	55	20
Ce		*	2					9																	
As					2				*	40	*														
Laj															2				10	1	12	17	10	35	33
Sse																	1	*							
Pm																									
Ht																									
Par																									
Au																									
Lm																									
Sg																									
Mp																									
Sst																									
Sr																									
Rv																									
Cv																									
Ep																									
P																									
Ch																									
Rco																									
Hve																									
Aaa																									
An																									
Tot	15	15	42	40	47	45	45	34	35	65	35	28	8	7	17	18	31	27	25	21	47	35	55	90	53
BS	85	85	58	60	53	55	55	66	65	35	65	72	80	93	81	65	50	50	55	30	15	25	2	20	25
(L)						5							5	2	5	20	35	35	30	60	70	65	80	20	40

Transect C, *continued*

Meter #	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Ab	22	11	10	10	14	18	5	7	17	35	28	30	35	40	30	20	18	5	8	4	5	2	3	2	2
Ce																									
As																									
Laj	28	25	7	11	5	7																			
Sse			50	9	16	3	40	16	6		1	2	1							3					
Pm								*								*	3	50	50	22	*	10	10	*	15
Ht																				6		2	7	3	3
Par																					*				
Au																								25	40
Lm																									
Sg																									
Mp																									
Sst																									
Sr																									
Rv																									
Cv																									
Ep																									
P							*																		
Ch																									
Rco																									
Hve																									
Aaa							1																		
An																									
Tot	50	36	67	30	35	28	46	23	23	35	29	32	36	40	30	20	21	55	58	35	5	4	20	30	60
BS	35	55	12	9	2	28	20	22	10	5	12	15	22	1	28	45	50	45	50	65	90	92	75	70	25
(L)	25	15	40	65	80	35	40	65	85	85	80	70	50	80	55	45	35	10	5	5	5	4	5	10	30

Transect C, ***continued***

Meter #	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ab	3	2	10	10	25	20	18	6	12	10	15	9	5	4	3	*	2	1	3	4	3	1	2	2	1
Ce																									
As																									
Laj																									
Sse	2	3	1	2	1	5	1	1	*	3		2							2		2				
Pm	20									3			2		2	3				2	25	50	15		11
Ht		2		1	*	1	3	16	15	6	5	4	7	16	13	5	2	5	*					2	2
Par																									
Au	10	25					1	8									45	25	3			20	65	90	65
Lm													1										1	1	
Sg																		1		*		2	1	2	
Mp																		3	10		15	50	2	4	
Sst																				1	1	8	1		
Sr																				*					
Rv																					4	15	12		
Cv																									
Ep																									
P																									
Ch																									
Rco																									
Hve																									
Aaa																									
An																									
Tot	35	32	11	13	26	26	23	31	27	22	20	15	15	20	18	8	49	35	18	7	50	146	99	101	79
BS	40	50	55	35	25	25	60	55	55	60	60	70	85	50	75	80	45	45	75	65	25			3	20
(L)	30	20	45	60	65	70	25	18	25	20	30	15	3	5	15	15	10	20	10	40	40		20		8

Transect C, *continued*

Meter #	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Ab	1	*	3	*	*	*	*																		
Ce																									
As																									
Laj																									
Sse			1						3			1	1					*							
Pm	6	15			3																				
Ht	7	15	22	7	6	40	20	6	1	*	1	3	7	1	1	*									
Par							*		*		*		*												
Au	50	1																							
Lm																									
Sg																									
Mp																									
Sst																									
Sr																									
Rv																									
Cv							*	*							1										
Ep												1													
P								*		1	*	1	*	1	*	*	1	*							
Ch																									
Rco																									
Hve																									
Aaa								1																	
An																									
Tot	64	31	26	7	9	40	20	7	4	1	1	5	8	2	2		1								
BS	28	60	75	91	91	50	75	92	90	99	99	95	90	98	98	99	99	99	100	100	100	100	100	100	100
(L)	15	12	3	2	1	10	5	1	6				3												

Transect C, *continued*

Meter #	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
Ab		3	*	*	1	7	3	1															*	1	*
Ce																									
As																									
Laj																									
Sse			4	1							*														
Pm																									
Ht			2								1	4	16	25	4	7	8	3	*		5	6	1	5	6
Par					*	*		1	1			*			*	*									
Au																		1	4	6	4	45	75	75	40
Lm																									
Sg																									
Mp																									
Sst																									
Sr																									
Rv																									
Cv													*												
Ep		*	*			*																			
P		*	*	1	1	*	*	1	*		1	1	*	*		1	*	*							
Ch																									
Rco																									
Hve																									
An																									
Tot	0	3	6	2	2	7	3	3	1	0	2	5	16	25	4	8	8	4	4	6	9	51	76	81	46
BS	100	96	92	98	98	93	97	97	99	100	98	92	75	55	88	87	77	93	92	88	81	45	20	5	50
(L)			2									3	10	20	8	5	15	3	4	6	10	5	10	15	5

Transect C, *continued*

Meter #	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Ab	4	3	*	4	6												*			1	1	*	1	3	1
Ce																									
As																									
Laj																									
Sse						1	3	35												5					
Pm	2	2	3		1	2				3	2	5	26	35	50	33	25	22	1			3	1		
Ht	1	*																	*						
Par	2																		5	60	90	65	60	65	85
Au	3																1								
Lm																									
Sg																									
Mp																									
Sst																									
Sr																									
Rv																									
XCv																									
Ep																									
P																					2			1	2
Ch																									
Rco																									
Hve																									
Aaa																				2					
An																									
Tot	12	5	3	4	7	3	3	35	0	3	2	5	26	35	50	33	26	22	6	68	93	68	62	69	88
BS	85	90	91	94	90	77	65	55	75	95	97	92	60	50	35	50	50	68	90	30	5	30	35	25	10
(L)	5	5	6	2	3	20	35	10	25	2	1	3	15	15	15	20	25	10	5	5	2	5	5	7	2

Transect C, *continued*

Meter #	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170
Ab	1	*	*	1	1	2	2	4	*		*	*								
Ce																				
As																				
Laj																				
Sse													3				2	25	18	2
Pm	3																			
Ht	8		12	18	20	5	2	10	35	6										
Par																				
Au	85	80			3	10	7			4	85	75	60	35	40	40	65	45	12	35
Lm		*	2	4			4											1	3	1
Sg											*	2	4	18	7	3	4	4	15	3
Mp																				
Sst																				
Sr																				
Rv																				
Cv			*																	
Ep																				
P		4												1	3	*	2			1
Ch													5	25	3	28			2	2
Rco														*					2	2
Hve																			1	
Aaa	2																		1	
An																				1
Tot	99	80	14	23	24	17	15	14	35	10	85	75	73	86	49	96	69	71	41	46
BS	5	20	81	70	40	80	81	80	30	70	15	25	30	6	5	15	20	25	25	40
(L)			5	7	40	5	4	6	35	20		1	2	45	45	15	10	5	25	20

Tree Density (stems/100 m²)

Species	Plot numbers																
	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	18
Ilex opaca	11	19	16	12	7	4	3	14	4	5	2	10	11			1	10
Sassafras albidum	1		6	7	6	3	1	1	3	1	2	5	1	5	5	2	4
Amelanchier canadensis	3		23	8	1		10	7			5	3		4	9	23	9
Nyssa sylvatica		7						1				4		3			
Quercus velutina										1							
Q. Stellata	2									1							
Vaccinium corymbosum	11			2	2	1	1			2		14	6	3	3	10	
Juniperus virginiana																	
Pinus rigida						1											
Prunus serotina	2					3											
Rhus copallina									5		2				1		
Pyrus arbutifolia	1										3	3	2	1			
Rhododendron viscosum					1							3					
Baccharis halimifolia																	
Rhus radicans				1													
Ilex glabra																	
Rhus vernix																	
Quercus coccinea																	
Total	31	26	45	30	17	12	15	23	12	10	14	42	20	16	18	42	23

Tree Density (stems/100 m²)

Species	Plot numbers																
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Ilex opaca	26	1		12	8	12		1		2	3		7			2	9
Sassafras albidum	1	3	6	1	5	6	2	6	3	2		5	1	1		2	4
Amelanchier canadensis	12	12	15	18	17	20	6	12	20	9		9	19	1			1
Nyssa sylvatica		5	1							4	1				1		
Quercus velutina						1	1										
Q. stellata																	
Vaccinium corymbosum	4		3	16				3	1	7	5	18	4		13	6	
Juniperus virginia										2							
Pinus rigida																	
Prunus serotina	1		1			1					2						
Rhus copallina	1				1				1					2			
Pyrus arbutifolia		1	1			1									2		
Rhododendron viscosum				1											1		
Baccharis halimifolia										7							
Rhus radicans					1												
Ilex glabra				3													
Rhus vernix															2		
Quercus coccinea										1							
Total	45	22	27	51	32	41	9	22	25	27	18	32	31	4	19	10	14

Tree Basal Area ($cm^2/100\ m^2$)

Species	Plot numbers											
	1	2	3	4	5	6	7	8	9	10	12	13
Ilex opaca	2024	1997	1745	984	902	569	545	2249	1078	1295	706	1068
Sassafras albidum	460		523	1011	1460	52	483	163	74	445	601	1683
Amelanchier canadensis	63		1112	951	129		503	983			224	288
Nyssa sylvatica		1889						196				69
Quercus velutina										1372		
Q. stellata	1277									968		
Vaccinium corymbosum	155			16	18	7	17			21		169
Juniperus virginiana												
Pinus rigida						452						
Prunus serotina	34					222						
Rhus copallina									199		16	
Pyrus arbutifolia	9										35	36
Rhododendron viscosum					10							26
Baccharis halimifolia												
Rhus radicans				35								
Ilex glabra												
Rhus vernix												
Quercus coccinea												
Total	4022	3886	3380	2997	2519	1302	1548	3591	1351	4101	1602	3339

Tree Basal Area ($cm^2/100\ m^2$)

Species	Plot numbers										
	14	15	16	17	18	19	20	21	22	23	24
Ilex opaca	2004			123	2040	2030	28		1122	749	1670
Sassafras albidum	68	117	1397	101	112	22	441	772	75	334	676
Amelanchier canadensis		78	285	540	980	749	448	290	1056	1085	1388
Nyssa sylvatica		606					845	227			
Quercus velutina											97
Q. stellata											
Vaccinium corymbosum	57	31	37	107		64		22	201		
Juniperus virginiana											
Pinus rigida											
Prunus serotina						50		33			8
Rhus copallina			35			14				36	
Pyrus arbutifolia	18	9					9	7			14
Rhododendron viscosum				50					11		
Baccharis halimifolia											
Rhus radicans										11	
Ilex glabra									23		
Rhus vernix											
Quercus coccinea											
Total	2147	841	1754	921	3132	2929	1771	1351	2488	2215	3853

Tree Basal Area ($cm^2/100\ m^2$)

Species	Plot numbers										
	25	26	27	28	29	30	31	32	33	34	35
Ilex opaca		186		56	179		676			1024	2647
Sassafras albidum	149	528	829	297		154	219	366		2197	1688
Amelanchier canadensis	152	934	531	244		165	1569	13			17
Nyssa sylvatica				882	72				181		
Quercus velutina	2359										
Q. stellata											
Vaccinium corymbosum		39	12	66	84	239	72		146	109	
Juniperus virginiana				459							
Pinus rigida											
Prunus serotina					38						
Rhus copallina			8					28			
Pyrus arbutifolia									15		
Rhododendron viscosum									12		
Baccharis halimifolia					77						
Rhus radicans											
Ilex glabra											
Rhus vernix									22		
Quercus coccinea				13							
Total	2600	1687	1380	2017	450	558	2536	407	375	3330	4352

Shrub Basal Area ($cm^2/100\ m^2$)

Species	Plot numbers										
	1	2	3	4	5	6	7	8	9	10	12
Vaccinium corymbosum	348	44		56			296			16	
Amelanchier canadensis			32								16
Pyrus arbutifolia											76
Rhododendron viscosum											
Baccharis halimifolia											
Ilex glabra											
Ilex opaca		408	12								
Rhus radicans	20										
Gaylussacia baccata											
Rhus copallina											
Sassafras albidum						88					
Rosa rugosa											
Sambucus canadensis											
Nyssa sylvatica		16									
Viburnum dentatum											
Rhus vernix											
Pteridium aquillinum											4
Prunus serotina											
Rubus sp.											
Total	368	468	44	56		88	296			16	96

Shrub Basal Area ($cm^2/100\ m^2$)

Species	Plot numbers											
	13	14	15	16	17	18	19	20	21	22	23	24
Vaccinium corymbosum	588	72	64	512	1256	1628	252	4	64			52
Amelanchier canadensis	60			222	1124		12	48	20			
Pyrus arbutifolia	68	68	128	80	544			176		252		
Rhododendron viscosum					308							
Baccharis halimifolia												
Ilex glabra				10		48		36	24	556		
I. opaca							76					
Rhus radicans		36	52			4			4	76	3	12
Gaylussacia baccata										132	28	8
Rhus copallina												
Sassafras albidum											92	
Rosa rugosa												
Sambucus canadensis												
Nyssa sylvatica	44		2					2				
Viburnum dentatum						54						
Rhus vernix												
Pteridium aquillinum												
Prunus serotina												
Rubus sp.												
Total	760	176	246	824	3232	1734	340	266	112	1016	123	72

Shrub Basal Area ($cm^2/100\ m^2$)

Species	Plot numbers										
	25	26	27	28	29	30	31	32	33	34	35
Vaccinium corymbosum	220	20	200	128		228	572		824	68	
Amelanchier canadensis	104	40	481			228	420		64		
Pyrus arbutifolia			8	100		76			48		
Rhododendron viscosum									972		
Baccharis halimifolia					872						
Ilex glabra	32					4					
I. opaca											76
Rhus radicans	56		12		68	4		76			
Gaylussacia baccata			20	80			88				
Rhus copallina								348			
Sassafras albidum		20					32	3			
Rosa rugosa					32		84	24			
Sambucus canadensis					68						
Nyssa sylvatica											
Viburnum dentatum											
Rhus vernix									22		
Pteridium aquillinum								22			
Prunus serotina											
Rubus sp.										1	
Total	412	80	721	308	1040	540	1196	473	1930	69	76

Shrub Density (stems/100 m²)

Species	Plot numbers																
	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	18
Vaccinium corymbosum	28	4		4			20			4		68	24	12	80	144	152
Amelanchier canadensis			4								4	4			24	120	
Pyrus arbutifolia											16	8	12	20	32	144	
Rhododendron viscosum																120	
Baccharis halimifolia																	
Ilex glabra															24		20
I. opaca		4	4														
Rhus radicans	20												4	84			8
Gaylussacia baccata																	
Rhus copallina																	
Sassafras albidum						12											
Rosa rugosa																	
Sambucus canadensis																	
Nyssa sylvatica		20										8		4			
Viburnum dentatum																	16
Rhus vernix																	
Pteridium aquillinum																	
Prunus serotina											4						
Rubus sp.																	
Total	48	28	8	4		12	20			4	24	88	40	120	160	528	196

Shrub Density (stems/100 m²)

Species	Plot numbers																
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Vaccinium corymbosum	40	4	24			24	24	4	16	16		92	88		288	20	
Amelanchier canadensis	8	4	4				8	8	40			16	48		16		
Pyrus arbutifolia		32		60					4	36		8			8		
Rhododendron viscosum															244		
Baccharis halimifolia											20						
Ilex glabra		16	8	168			8					8					
I. opaca	12																16
Rhus radicans			12	48	4	4	48		3		64	12		64			
Gaylussacia baccata				48	24	8			28	68			64				
Rhus copallina														64			
Sassafras albidum					8			4					8	8			
Rosa rugosa											20		136	32			
Sambucus canadensis											24						
Nyssa sylvatica		4															
Viburnum dentatum																	
Rhus vernix															8		
Pteridium aquillinum														72			
Prunus serotina																	
Rubus sp.															4		
Total	60	60	48	324	36	36	88	16	100	120	128	132	344	240	544	24	16

Sunken Forest Herbaceous Layer
per cent cover

Plot #	1	2	3	4	5	6	7	8	9	10
Acs			5.00	*			0.25	3.50		
An		26.25		5.00	15.25	5.75	1.25		6.25	27.50
Bh										
Cse										
Dys										
Gp										
Gb										
Huv										
Ig										
Io										20.00
Mc		17.50		0.50	1.25	4.50	2.25	2.00	2.50	
Mp										
Ns		12.50			2.25			2.75	*	
Or										
Pq	2.00	3.75	3.75	9.25	0.50	2.00	7.00	2.25	2.25	
Pc										
Ppu										
Ps		*	1.00	*	*			1.50		
Paq							5.50			
Pya										
Qv										
Rv					1.00					
Rco	1.50						1.25	1.50		
Rr	5.50	0.25	2.50	11.00			8.00		2.50	0.75
Ror			1.00			1.50				
R										
Sas		0.75	5.75	5.75	2.00	0.25	2.00	0.75	1.25	1.75
Sst	0.25	0.75	0.50	0.25	2.75	1.00		13.00	2.75	
Sse										
Tc										
Tb										
Vc	0.25		20.00	0.50	0.5					
Vm							18.75			
V										
Xe										
Total	9.50	61.75	39.50	32.25	25.50	15.00	45.50	27.25	17.50	50.00
				Stems/m²						
Sq			0.5					0.50		
Sr	11.75	0.25	1.25	8.75	8.00	6.25	4.50	4.00	5.00	3.00

Sunken Forest Herbaceous Layer
per cent cover

Plot #	12	13	14	15	16	17	18	19	20
Acs	0.50						0.25	1.50	0.75
An	37.50	1.50	13.75		3.75		28.25	7.50	
Bh						3.50			
Cse									
Dys		0.50							
Gp									
Gb				6.00	17.50	8.75			
Huv									1.50
Ig		0.25	0.25				1.00		18.00
Io									
Mc	0.75	0.50			0.50		2.25		
Mp						0.50		0.50	
Ns		1.75		0.25		0.25			4.50
Or				3.75					
Pq	1.25		0.25	0.50	5.75	1.00	1.50	0.75	*
Pc									
Ppu				0.75					
Ps									*
Paq								1.50	1.00
Pya	0.50	1.00	6.25	1.25					2.25
Qv									
Rv						1.50			
Rco			3.00						
Rr	1.75	7.50	41.25	25.25	28.00	13.75	4.25	5.75	1.50
Ror									
R		0.25							
Sas	1.50		1.50				3.00	1.50	
Sst			0.25				2.00	0.75	
Sse						3.75			
Tc									
Tb		1.50							1.50
Vc		7.50		3.00	0.25	5.50			1.75
Vm									
V									
Xe									
Total	56.25	22.00	66.50	40.75	55.75	38.50	42.50	19.75	32.75
				Stems/m²					
Sq	0.50						0.25		0.50
Sr	1.25	1.50	1.25		3.75	1.75	7.75	0.25	0.50

Sunken Forest Herbaceous Layer
per cent cover

Plot #	21	22	23	24	25	26	27	28	29	30
Acs	1.00	2.00		3.75			*		1.50	1.00
An	1.00	1.00		9.75	3.00	9.00				
Bh								1.75		
Cse									0.25	
Dys										
Gp	0.50									
Gb		0.75	38.25	2.00	15.50		8.00	23.75		23.75
Hyv										
Ig		23.75								0.50
Io										
Mc										
Mp										
Ns	0.50							3.00		
Or										
Pq	1.00	2.00	7.25	1.50	12.50	5.50	4.75		4.50	4.50
Pc									6.25	
Ppu										
Ps				*					1.25	
Paq	5.75	3.75	0.75				3.75			1.25
Pya	0.75	2.75								0.50
Qv										
Rv										
Rco							6.25	1.25	2.50	
Rr	20.75	6.00	6.25	2.25	41.75	1.75	21.25	7.25	21.75	4.75
Ror					1.00		3.75	23.75		
R										
Sas	0.50	1.50	1.00	0.50		1.00	1.75	1.50	3.00	0.75
Sst	0.75			0.25	1.25	0.50	*		8.25	
Sse								0.75		
Tc									3.00	
Tb	3.00	0.50								2.00
Vc	28.50	0.50	3.75		0.25	0.25	7.50	0.75		
Vm								18.75		
V										
Xe									5.00	
Total	64.00	44.50	59.75	19.50	75.25	18.00	57.00	78.75	57.25	39.00
				Stems/m^2						
Sq	0.75	0.50	0.50				0.75		0.25	0.50
Sr	0.50		3.25	3.50	3.00	3.75	1.25		3.00	2.25

Sunken Forest Herbaceous Layer
per cent cover

Plot #	31	32	33	34	35
Acs	0.50			1.00	
An				48.75	30.00
Bh					
Cse					
Dys					
Gp					
Gb	1.50				
Hyv					
Ig					
Io				*	
Mc				6.50	1.75
Mp					
Ns					
Or			1.00		
Pq	5.50	6.00	7.50	8.75	10.50
Pc					
Ppu					
Ps					*
Paq		5.25			
Pya	0.75		0.50		
Qv				0.25	
Rv			4.00		
Rco	1.00	28.00			
Rr	7.00	19.00	8.50		17.50
Ror	19.50	1.50			0.50
R					
Sas	0.75	3.50	1.00		2.50
Sst				5.00	4.25
Sse					
Tc					
Tb				0.50	
Vc	0.25		2.00		
Vm					
V					
Se					
Total	36.75	63.25	24.75	70.75	67.00
				Stems/m^2	
Sq					0.25
Sr		4.25	1.50	2.25	3.75

Species List Sunken Forest Area and Key

Key	
Ar	*Acer rubrum*
Am	*Achillea millefolium*
Ac	*Acnida cannabina*
Aaa	*Agrostis alba*
Aal	*Amaranthus albus*
Acs	*Amelanchier canadensis*
Ab	*Ammophila breviligulata*
An	*Aralia nudicaulis*
Au	*Arctostaphylos uva-ursi*
Ape	*Arenaria peploides*
Aca	*Artemisia caudata*
As	*A. stelleriana*
Ast	*Aster novo-belgii*
Apa	*Atriplex patula* var. *hastata*
Bh	*Baccharis halimifolia*
Bv	*Berberis vulgaris*
Ce	*Cakile edentula*
Cp	*Carex pensylvanica*
Cs	*C. silicea*
Co	*Celastrus orbiculatus*
Csc	*C. scandens*
Cal	*Chenopodium album*
Cm	*Chimaphila maculata*
Ch	*Cirsium horridulum*
Caf	*Clethera alnifolia*
Cse	*Convolvus sepium*
Cc	*Cuscuta compacta*
Ce	*Cyperus erythrorhizos*
Cr	*C. rotundus*
Cst	*C. strigosus*
Cac	*Cypripedium acaule*
Ds	*Distichlis spicata*
Dr	*Drosera rotundifolia*
Dys	*Dryopteris spinulosa*
Dt	*D. thelypteris*
Ea	*Eleocharis acicularis*
Es	*Eragrostis spectabilis*
Ep	*Euphorbia polygonifolia*
G	*Gallium* sp.
Gp	*Gaultheria procumbens*
Bg	*Gaylussacia baccata*
Gr	*Geranium robertianum*
Hp	*Hibiscus palustris*
Hve	*Hieracium venosum*
Ht	*Hudsonia tomentosa*
Hyv	*Hypericum virginicum*
Ig	*Ilex glabra*
Io	*I. opaca*
If	*Iva frutescens* var. *oraira*
Jv	*Juniperus virginiana*
Lc	*Lactuca canadensis*
Laj	*Lathyrus japonicus* var. *glaber*
Lm	*Lechea maritima*
Loj	*Lonicera japonica*
Mc	*Maianthemum canadense*
Ml	*Melanpyrum lineare*
Mu	*Monotropa uniflora*
Mg	*Myrica gale*
Mp	*M. pensylvanica*
Ns	*Nyssa sylvatica*
Op	*Oenothera parviflora*
Oc	*Osmunda cinnamomea*
Or	*O. regalis*
P	*Panicum* spp.
Pam	*P. amarum*
Pau	*P. auburne*
Pv	*P. virgatum*
Pq	*Parthenccissus quinquefolia*
Pc	*Phragmities communis*
Pam	*Phytolacca americana*
Pbk	*Pinus banksiana*
Pr	*P. rigida*
Pt	*P. thunbergii*
Pl	*Plantago lanceolata*
Ppv	*Pluchea purpurascens* var. *succulenta*
Pb	*Polygonatum biflorum*
Par	*Polygonella articulata*
Poc	*Polygonum convolvulus*
Ppu	*P. punctatum*
Pm	*Prunus maritima*
Ps	*P. serotina*
Paq	*Pteridium aquillinum*
Pya	*Pyrus arbutifolia*

Qc	*Quercus coccinea*	Sam	*Scirpus americanus*
Qr	*Q. rubra*	Sme	*Sesuvium maritumum*
Qs	*Q. stellata*	Sst	*Smilacina stellata*
Qv	*Q. velutina*	Sg	*Smilax glauca*
Rvi	*Rhododendron viscosum*	Sr	*S. rotundifolia*
Rco	*Rhus copallina*	So	*Solidago odora*
Rr	*R. radicans*	Sse	*S. sempervirens*
Rvx	*R. vernix*	Spa	*Spartina alterniflora*
Rcy	*Ribies cynosbati*	Spp	*S. patens*
Rca	*Rosa carolina*	Sum	*Suaeda maritima*
Ror	*R. rugosa*	Te	*Teucrium canadense*
R	*Rubus allegheniensis*	Tb	*Trientalis borealis*
Rh	*R. hispidus*	Ta	*Typhae angustifolia*
Ra	*Rumex acetosella*	Va	*Vaccinium atrococcum*
Rcr	*R. crispus*	Vc	*V. corymbosum*
Se	*Salicòrnia europea*	Vm	*V. macrocarpon*
Ska	*Salsola kali*	Vb	*Viburnum dentatum*
Skt	*S. kali* var. *tenuifolia*	V	*Vitis* sp.
Sc	*Sambucus canadensis*	Xe	*Xanthium echinatum*
Sas	*Sassafras albidum*		

Nomenclature follows Fernald, M. L. 1950. *Gray's Manual of Botany,* eighth edition.