

**APPENDIX 4. Dendrochronology samples, including: locations, descriptions of sample types, sample ages, and growth ring observations relating to dating from samples collected in 1991**



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Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
2b	Nile Brook, Inverness County	N-1 N-2 N-3 N-4	Section* Section Section Section	1981 1981 1980 1980	Minimum age on youngest event Minimum age on youngest event Minimum age on youngest event Minimum age on youngest event (pre-1966/67 avalanche not dated)
4a	Marks Shanty Brook	M-3	Section	1925	Tree growing vertically out of a fallen, buried log in stream bed (dates oldest avalanche)
4b	Marks Shanty Brook, Inverness County	M-1	Section	1976(77)	Thick last ring (no late wood); 1990/91 age uncertain
		M-2	Section	1976 $\pm$ 1	Uncertain heart ring and indistinct 1991 ring
		M-4	Section	1974 $\pm$ 1	Several indistinct rings
		M-5a	Section	1973	Wide early wood on last ring (predates young avalanche)
		M-5b	Section	1975	Three years symmetrical growth, following 14 years assymetrical growth. Thick early wood on last ring (maximum age)
		M-6	Section	1973-75	Several indistinct rings; last ring contains late wood, i.e. 1990(91) ring?
		M-7	Scar	1971	Moderate thickness of early wood on last ring
6	Peters Brook, Inverness County	P-2	Section	1946	Formation of reaction wood in response to tilting; maximum age
		P-3	Section	1955	Thin early wood on last ring; minimum age
		P-4	Section	1972	Thin early wood on last ring; minimum age
		P-5	Section	1958	Thin early wood on last ring; minimum age

\*Section = trunk section cut from revegetation

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
7	Peters Brook, Inverness County	P-7	Section	1982	Thin early wood on last ring; minimum age
		P-8	Section	1982	Thin early wood on last ring; minimum age
		P-9	Section	1982	Thin early wood on last ring; minimum age
		P-10	Section	1981(82)	Thin early wood on last ring; minimum age
		P-11	Section	1981	Thin early wood on last ring; minimum age
		P-12	Section	1981	Thin early wood on last ring; minimum age
9a	Barachois River, Victoria County			1991	1990 growth is horizontal; 1991 new growth is vertical
				1991	1990 growth is horizontal; 1991 new growth is vertical
9b	Barachois River, Victoria County	Ba-3	Section	1978	Thin early wood on last ring; minimum age
		Ba-4	Section	1977(78)	1990 or 1991 age of last ring uncertain; minimum age
		Ba-5	Section	1982	Thin early wood on last ring; minimum age
		Ba-6	Section	1982(83)	Thick early wood on last ring with no late wood; minimum age
		Ba-7	Section	1983	Thin early wood on last ring; minimum age
		Ba-8	Section	1981	Date based on occurrence of distinct reaction wood; four years of very slow growth (thin rings) prior to dark reaction wood, next eleven years of more rapid growth (i.e. increased sun light)
		Ba-9	Section	1983	Thin early wood on last ring; minimum age
		Ba-10	Section	1981(82)	Moderately thick early wood on last ring; one uncertain ring, minimum age
		Ba-11	Section	1982	Moderately thick early wood on last ring; minimum age

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
9c	Barachois River, Victoria County	Ba-12	Section	1985	Thin early wood on last ring (well defined rings); minimum age
		Ba-13	Section	1984	Thin early wood on last ring (well defined rings); minimum age
		Ba-14	Section	1985	Thin early wood on last ring (well defined rings); minimum age
9d	Barachois River, Victoria County	Ba-15	Section	1986	Thin early wood on last ring (well defined rings); minimum age
		Ba-16	Section	1986	Thin early wood on last ring (well defined rings); minimum age
		Ba-17	Section	1986	Thin early wood on last ring (well defined rings); minimum age
9e	Barachois River, Victoria County	Ba-18	Section	1984	Thick early wood on last ring (well defined rings); minimum age
9f	Barachois River, Victoria County	Ba-19	Section	1987	Thick early wood on last ring; minimum age
		Ba-20	Section	1987	Thick early wood on last ring; minimum age
		Ba-21	Section	1986	Thick early wood on last ring; minimum age
12	Middle Branch North River, Victoria County	North-1	Scar	1986	Thin early wood on last ring; absolute age
13	Middle Branch North River, Victoria County	North-2	Section	1959-62	A few indistinct rings that may represent seasonal variations rather than yearly growth cycles
14	Middle Branch North River, Victoria County	North-3	Section	1963	Overgrown scar dating original avalanche event; absolute age?
				1968	Overgrown scar dating younger avalanche event; absolute age?
		North-4	Section	1971	1991 growth ring not developed; sample collected July 3, 1991; minimum age
		North-5	Section	1970	Thin early wood on last ring; minimum age
		North-6	Section	1973	Thin early wood on last ring; minimum age

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
15	Middle Branch North River, Victoria County	North-7	Section	1985	Moderately thick early wood on last ring; minimum age
		North-8	Section	1985	Moderately thick early wood on last ring; minimum age
		North-9	Section	1985	Thin early wood on last ring; minimum age
16	Middle Branch North River, Victoria County	North-10	Section	1984	Date based on first appearance of compression wood; absolute age
		North-11	Section	1984	Date based on first appearance of compression wood; absolute age
		North-12	Section	1984	Date based on first appearance of compression wood; absolute age
17	Middle Branch North River, Victoria County	North-13	Section	1985(86)	Moderately thick early wood on last ring; uncertain heart ring; minimum age
		North-14	Section	1986	Moderately thick early wood on last ring; minimum age
		North-15	Section	1985(86)	Moderately thick early wood on last ring, one uncertain ring; minimum age
18	Middle Branch North River, Victoria County	North-16a	Scar	1985	Thin early wood on last ring; rings > 7 years prior to avalanche show moderate growth, rings representing 6 years of growth prior to avalanche are very narrow, rings postdating avalanche are very wide; absolute age
		North-16b	Scar	1985	Same as North-16a; absolute age
		North-17	Scar	1985	Same as North-16a; absolute age
19	Middle Branch North River, Victoria County	North-18	Section	1982	Thin early wood on last ring; minimum age
		North-19	Section	1979	Thin early wood on last ring; minimum age
		North-20	Section	1982	Vertical branch (tree) growing from a horizontal, partially buried log; thin early wood on last ring; absolute age?

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
20	Middle Branch North River, Victoria County	North-22	Scar	1979	Intermediate age avalanche impact; absolute age
		North-23	Scar	1967	Old scar dating original avalanche; absolute age
		North-24	Scar	1989	Very recent shallow rock strike; absolute age
21	Middle Branch North River, Victoria County	North-25	Scar	1985	Thin early wood on last ring; absolute age
		North-26	Section	1986	Moderately thick early wood on last ring; minimum age
		North-27	Section	1987	Thin early wood on last ring; minimum age
23	Middle Branch North River, Victoria County	North-28	Scar	1989	Thin early wood on last ring; absolute age(?)
24	Easy Branch North River, Victoria County	North-29	Scar	1972	Moderately thick early wood on last ring; absolute age
		North-30	Scar	1963	Thin early wood on last ring; absolute age
		North-31	Scar	1948-58	Rings are very poorly developed
		North-32	Section	1954?	Rings are very poorly developed; thin early wood on last ring
25	Margaree River, Inverness County	MR-33	Section		Lost sample
		MR-34	Section	1985	Thick 1991 ring developed
		MR-35	Section	1984	Thick 1991 ring developed
		MR-38	Scar	1984	Moderately thick 1991 ring
27	Margaree River, Inverness County	MR-36	Scar	1980	Absolute age
		MR-37	Scar	1982	Absolute age

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
28	Margaree River, Inverness County	MR-39	Scar	1982	Thin early wood on last ring; absolute age
		MR-40	Scar	1986(87)	Thin early wood on last ring; several faint growth rings
		MR-41	Scar	1981(82)	Presence of 1991 growth ring uncertain
31	Margaree River, Inverness County	MR-42	Scar	1982	Thick early wood on 1991 ring; absolute age
		MR-43	Scar	1984(85)	One indistinct ring
		MR-44	Scar	1982	Thin early wood on 1991 ring; absolute age
33	Rocky Brook, Inverness County	MR-45	Scar	1985	Small slide in compound avalanche; thick 1991 early wood; absolute age
		MR-46	Scar	1985	Large slide in compound avalanche; almost complete 1991 ring; absolute age
34	Northeast Margaree River, Inverness County	MR-47	Section	1987	Moderately thick early wood on last ring; minimum age
		MR-48	Section	1987	Moderately thick early wood on last ring; minimum age
		No #	Section	1986	Dark coloured and indistinct 1991 ring-wood; minimum age
35	Northeast Margaree River, Inverness County			1990-91	Based on debris on riverbank in area with low preservation potential
36	Northeast Margaree River, Inverness County	MR-49	Section		Numerous zones of reaction wood; reliable date not possible

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
38	East Branch North River, Victoria County	NR-50	Section	1985	Vertical branch from horizontal trunk; minimum age
		NR-51	Section	1979	Section of trunk from NR-50; predates avalanche
		NR-52	Section	1985	Thick early wood on last ring; minimum age. Vertical branch from horizontal trunk; minimum age
39	East Branch North River, Victoria County	NR-54	Scar	1985	Absolute age
40	East Branch North River, Victoria County	NR-55	Scar	1986(87)	Compound avalanche, scar faces nonvegetated avalanche, indistinct scar; reaction wood predates scaring
		NR-56	Scar	1982	Distinct ring growth, oblique to vegetated avalanche; absolute age
		NR-57	Section	1982	Based on increased width of growth rings, i.e. removal of canopy vegetation
		NR-59a	Scar	1983	Scar faces vegetated avalanche, thick early wood on last ring; absolute age
		NR-59b	Scar	1981(82)	Scar faces vegetated avalanche
		NR-59c	Scar	1975	Scar faces nonvegetated avalanche?
41	Bothan Brook, Victoria County	8-60	Scar	1981	Thin early wood on last ring; absolute age
42	Bothan Brook, Victoria County	B-61	-	-	Not dated
		B-62	Scar	-	Scar area has rotted
		B-63	Scar	-	Not suitable for dating
		B-64	Scar	1986	Thick early wood on last ring
		B-65	Scar	1985(86)	Early wood on last ring
		B-66	Scar	1982	Early wood on last ring
		B-67	Scar	1984	Early wood formed on 1984 ring prior to scaring, avalanche probably occurred during late July, 1984

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
43	Bothan Brook, Victoria County	B-68	Scar	1986	Age of young recent activity; not representative of original avalanche
		B-69	Scar	1982	Age probably representative of main avalanche event
		B-70	Section	1982	Age probably representative of main avalanche event
44	Bothan Brook, Victoria County			1990	No scars or new growth, age based on dead needles still on debris
45	Indian Brook, Victoria County	I-71	Scar	1986	Thick early wood on last ring (cut August 15, 1991); absolute age
		I-72	Scar	1985	Complete 1991 ring (cut August 15, 1991; absolute age)
46	West Branch Indian Brook, Victoria County	B-71	Scar	1987(88)	Late wood on 1991 ring; possible arrested growth on 1987 ring?
47	West Branch Indian Brook, Victoria County	B-72	Scar	1986(87)	Indistinct rings
		B-73	Scar	1983-86	Very indistinct rings
48	West Branch Indian Brook, Victoria County	B-74	Scar	1970	Age of scar with 'old' appearance
			Scar	1983	Age of a second scar from the same tree as the 1970 date
		B-75	Scar	1986	Age of scar with 'young' appearance
			Scar	1978±	Faint rings with tentative identification
		B-76	Scar	1987	Age from two scars on the same trunk
49	West Branch Indian Brook, Victoria County		Scar	1986±	Extremely faint rings
		B-77	Scar	1985±	Extremely faint rings
		B-78	Scar	1986	Damaged in early 1986, late wood forming on 1991 ring; absolute age
		B-79	Scar	1974	Oldest appearing, largest scar (1985 is a smaller scar); absolute age
	B-80	Section	1976	Minimum age due to small, faint rings; probably same age as B-79	

Avalanche Site	Location	Sample Number	Sample Type	Sample Age	Comments
50	West Branch Indian Brook, Victoria County	B-81	Scar	1977	Early wood on last ring; absolute age
51	West Branch Indian Brook, Victoria County	B-82	Scar	1990?	Poor sample
52	West Branch Indian Brook, Victoria County	B-83	Scar	1974	Absolute age; old and young scars on same trunk
			Scar	1984	Absolute age; old and young scars on same trunk
			Scar	1983	Based on two scars; absolute age
53a	Northeast Margaree River, Inverness County				Not safe to sample
53b	Northeast Margaree River, Inverness County				Not safe to sample
54	West Branch Indian Brook, Victoria County				Not sampled