

Table of Contents

Kenneth A. Armson R.P.F.

<u>Topic</u>	<u>Page</u>
Archaeology - Camps, Earthworks and Remains	2
Archaeology Slides	4
Erosion & Rehabilitation Slides	6
Finland - Sweden 1970	8
Fire Damage Study – 1968	13
Forest Management Audits 1993	22
Genetics and Tree Improvement (M. D. Meagher)	24
Geology & Land Form Slides	29
Land Use Slides	32
North Carolina Trip 1969	39
Norway, 1976	42
Site Preparation Equipment	44
Tree Slides	48

Aerofilms Educational Series
Archaeology - Camps, Earthworks and Remains

Location	Description	Date	No.
England	Rollright stones - 100 ft. diameter stone circle of megalithic origin. Near Chipping Norton, Oxfordshire		265
England	Badbury Rings - an iron age hill fort of multiple banks and ditches on a steep hill top site. Near Wimborne, Dorset		266
England	An iron age hill fort, single bank and ditch. Beacon Hill, near Whitchurch, Hampshire		267
England	An early neolithic monument marked by wooden posts. Woodhenge, near Amesbury, Wiltshire		268
England	An early iron age outer bank enclosing Roman and Norman Castle and Cathedral remains. Old Sarum, Wiltshire		269
England	An early bronze age henge monument or sanctuary. Stonehenge, Wiltshire		270
England	An early bronze age hill fort on the site of an earlier neolithic settlement. Maiden Castle, Dorset		271
Denmark	Viking settlement, Trelleborg Fortress. The island of Zealand, Denmark		272
England	The largest artificial mound in Britain of unknown origin and significance. Silbury Hill, Wiltshire		273
England	Neolithic long barrow, 350 ft. long, surrounded by a kerb of sarsen stones. West Kennet Long Barrow, Wiltshire		274
England	White Horse, first cut in the iron age, later attributed to King Alfred, probably The oldest white horse on the chalk downs. Uffington, Berkshire		275
England	Roman vicus or civilian suburb and the amphitheatre. Caerleon, Monmouthshire	276	
England	Open field strips, following the contours including the characteristic involuted shape. Crimscotte furrows. Near Stratford-on-Avon, Warwickshire		277
Scotland	Burnswark hill fort and Roman siege works. Lockerbie, Dumfriesshire		278
England	Abandoned Celtic field. Chilcomb Down, near Winchester, Hampshire		279
England	Site of lost village, Southorpe, near Hornsea, Yorkshire		280
	Stone age, bronze age, iron age and Viking settlements on one site. Jarlshof, Shetland		281

England	Roman theatre, Verulamium, St. Albans, Hertfordshire	282
England	Rutupiae, a third century Roman fort, with the ruins of a more recent castle and Defensive ditches. Richborough, Kent	283
France	Remains of a Roman amphitheatre, Arles, France	284
Iraq	The remains of the Malwiya, spiral minaret and remains of barracks. Near Samarra, Iraq	285
	Remains of rock carved temple. Petra near the Dead Sea	286
Libya	Remains of a Phoenician-Roman city. Leptis Magna, Libya	287
Africa	Graeco-Roman remains. Cyrene, North Africa	288

Archaeology Slides

(Kenneth A. Armson R.P.F.)

Can ON	Serpent Mounts, Rice Lake		1
	Bone pit ca 1100 AD - Glen Williams - general view		2
	Bone pit ca 1100 AD - Glen Williams - general view		3
	Bone pit ca 1100 AD - Glen Williams - general view		4
Can ON	Indian burial mounds - ca 900 AD - Long Sioux, Rainy River		5
Can ON	Burial mound - Rainy River		6
Can ON	Excavated Indian burial mounds - Rainy River- viewed from above		7a
Can ON	Excavated Indian burial mounds - Rainy River- viewed from above	1966	7b
Can ON	Long Sioux mound No. 7 - bones in mound	1966	8a
Can On	Indian burial mound - bones in position - Rainy River		8b
Can ON	Rolls of turf of which mound is composed - general view		9a
Can ON	Indian burial mound, Rainy River, No. 8 - rolls of turf		9b
Can ON	Post molds - 1400 AD - Oshawa		10a
Can ON	Post molds - 1400 AD - Oshawa		10b
Can ON	Post molds - 1400 AD - Oshawa		10c
Can ON	Post molds - 1400 AD - Oshawa - close-up view		11
Can ON	Post molds - 1400 AD - Oshawa - cross-section of post mold		12a
Can ON	Post molds - 1400 AD - Oshawa - cross-section of post mold		12b
Can ON	Indian burial mound, Fort Frances, Rainy River District		13
Can ON	1894 cemetery adjacent to Indian burial mound, Fort Frances. Bruce Ferguson		14
Can ON	Soil profile adjacent to Indian burial mound, Fort Frances		15
England	Stonehenge	1973	16
England	Mycenean daggers, Stonehenge	1973	17
England	Pollen profile of heath, New Forest		18
England	Pollen profile of oak, New Forest		19
Can NB	Rife site at longhouse location - hardwoods and old pine stumps, Mel Brown	Nov. 1999	20
Can NB	Rife site - close-up of cross-section of midden - near Campbellville	Nov. 1999	21a
Can NB	Rife site - midden - note ash layers - near Campbellville	Nov. 1999	21b
Can NB	Rife site - midden - ash layers - near Campbellville	Nov. 1999	21c
Can NB	Rife site near Campbellville, Dr. Bill Finlayson at midden		22

Can BC	Ancient (2500 BC) winter house at Shuswap Centre, Kamloops, BC	23
Can BC	Ancient (2500 BC) winter house construction at Shuswap Centre, Kamloops, BC	24

Olduvai Gorge Slides

Olduvai - view of gorge	
Olduvai - location & Zinjanthropus & bones	
Olduvai - hippo bone	7
Olduvai - view of gorge	9
Olduvai - Acacias & duvai plan	10
Olduvai - Massi cattle - note thorn bushes to protect bones	11
Early man's tools	12
Olduvai - Huts (reconstruction that early man used same as that use by bushman of the Kalahari)	13
Nairobi - Zinjanthorpus (right)	14
Olduvai - Zinjanthropus as was found - note matchstick	15

unnumb

unnumb

EROSION & REHABILITATION SLIDES

(Kenneth A. Armson)

Location	Description	Date	No.
	Erosion in moorland - Malvern		1
Can ON	Wind blowing in tobacco - Norfolk County	June 1958	2a
Can ON	Wind blowing in tobacco - Norfolk County	June 1958	2b
	Steep slope (200 ft valley) - erosion when forest removed, Black Brook	Sept.	3
Can BC	Soil erosion from overgrazing? - East Kootenay	1958	4
Can ON	Depot Harbour, Parry Island, Georgian Bay - shallow soil		5
Can On	Eroded soil - Caledon, Ont.		6a
Can On	Eroded soil - Caledon, Ont.		6b
Can AB	Gully erosion - Red Deer River, Alberta - aerial view		7
Can ON	Scarborough Bluffs	May 1968	8
Can ON	Eroded clay showing bottom of gully - Caledon, Ont.		9a
Can ON	Eroded clay - Caledon, Ont.		9b
	Erosion pattern - farm/forest - aerial view		10
Africa	Gullying - Eucalyptus globula, Kenya		11
USA NC	Efect of surface erosion on growth trees, Schenk Forest, North Carolina		12
	Erosion in silt loam, Burt Township, E M U		13
	Gully erosion in fine to medium sand, Hwy 66, Matachewan		14
	Erosion cumulation on slope -north of Swastika - E M U		15a
	Erosion cumulation on slope -north of Swastika - E M U		15b
Can ON	Erosion in clay loam following road building - Sanford-Mutrie, Dryden		16
	Erosion in fine sands - Burt Township, E M U		17a
	Erosion in fine sands - Burt Township, E M U		17b
	Gauging station - Mont---- Forest		18
Can BC	Erosion from logging road, Spuzzum, B.C.		19a
Can BC	Erosion from logging road, Spuzzum, B.C.		19b
Can BC	Natural erosion, Fraser R., B.C.		20
	Talus slope near Cache Creek		21
USA OR	Major gully and earth slippage, Oregon		22

USA OR	Road slippage, Oregon	23
USA OR	Erosion after clearcutting	24
Can AB	Open pit mining, Alberta	25
Can AB	Replacing top soil, Alberta	26
Can AB	Reclaimed mine spoil, Alberta	27
Can AB	McLeod R. after flood damage	28a
Can AB	McLeod R. after flood damage	28b

Finland - Sweden 1970

Location	Forest Type	Description	Date	No.
Finland		Map of Finland showing locations visited		1a
Finland		Map of Finland showing locations visited		1b
Finland		Map of Finland showing locations visited		1c
Finland		Map of Finland showing extent of Finnish State Forests		2
Finland		Distribution of forests & growth in Finland		3
		Nursery production - 230 mm		4
		Seed and plant - 340,000 ac.		5
Finland	PNsy	PNsy from Nisula - planted July 1967	1970	6
Finland		Vihtijorui (Hiiskulan Farm) - cut over 1966-67 - planted July 1967		7
Finland	PNsy/Pla	Vihtijorui (Hiiskulan Farm) - cut over 1966-67 - planted July 1967 with PNsy from Nisula Roll - Pla natural		8
Finland	PNsy	Haapastensyrja - tree breeding - view of grafts (PNsy)		9
	PNsy	Haapastensyrja - PN sy in Nisula Roll		10a
	PNsy	Haapastensyrja - Nisula Roll - PNsy sown March 1969 transplanted 1970		10b
	PNsy	Haapastensyrja - PNsy sown March 1969, transplanted into Nisula beds 1970		11
	BEv	Haapastensyrja - BEv - 4yr. seed trees (clones) in plastic house (not winter heated) - planted 1970		12
		Haapastensyrja - plastic house - not used in winter - showing end venting		13
		200 ppm		14
	Pla	Haapastensyrja - clonal grafts of Pla - note differences		15
	Pla	Haapastensyrja - Pla sown May 9/70 in peat - will be lifted and stored at -5 C in fall (Sept./70) - temporary plastic house		16a
	Pla	Haapastensyrja - PI a sown May 9/70 in peat - will be lifted and stored at -5 C in fall (Sept./70) - temporary plastic house		16b
	Pla	Haapastensyrja - Pla sown May/70 in plastic house		17
		Haapastensyrja - detail of venting of plastic house		18

	Pla	Haapastensyrja - rooted cuttings of Pla in heated peat		19
		Haapastensyrja - view of beds after plastic house removed		20
		Haapastensyrja - a production nursery - general view		21
		Haapastensyrja - Plastic house where cuttings are rooted		22
	Po	Haapastensyrja - 5 yr Po trem x tremula. Niels Kreiberg		23
Finland	PNsy	Vanajan - PNsy seed tree method		24
Finland	PNsy	Mannerlein's grounds at summer cottage - PNsy		25
		Mannerlein's summer cottage		26
	PNsy	Cut 1969, planted with Nisula roll - PNsy 1+1 -photo after 2 seasons		27
	PNsy	Cut 1969, planted May - Oct. with Nisula roll - PNsy 1+1		28
Finland	PNsy	Harviala - Rosenlew Oy - 100yr PNsy clear cut Apr./70 - scarified & planted 1970		29a
	PNsy	Harviala - Rosenlew Oy - 100yr PNsy clear cut Apr./70 - scarified & planted summer 1970		29b
		Harviala - Rosenlew Oy - Apr. 1970 cut over - summer Planted after scarification		30
		Harviala - Rosenlew Oy - cut Apr. 1970 - planted July 1970 detail of scarification spot & Nisula		31
		Harviala - Rosenlew Oy - staff house - awakened by pheasants under the window		32
Finland		Between Lahti and Imatra - Rapakivi - Mr. Nisula		33
	PNsy	Between Lahti and Imatra - A Finnish highway - note PNsy stands	34	
Finland		Tainionkoski (Enso-Gutzeit Oy) - general view of nursery producing 6 mm/yr		35a
		Tainionkoski (Enso-Gutzeit Oy) - general view		35b
	Pla	Tainionkoski (Enso-Gutzeit Oy) - 1+2 Pla in peat under plastic	36	
	PNsy	Tainionkoski (Enso-Gutzeit Oy) - 1+1 PNsy transplanted in peat	37	
	PNsy	Tainionkoski (Enso-Gutzeit Oy) - 1+1 PNsy transplanted into peat	38	
	PNsy	Tainionkoski (Enso-Gutzeit Oy) - 1+0 PNsy in peat - plastic house removed		39
	PNsy	Tainionkoski (Enso-Gutzeit Oy) - 1+1 PNsy transplanted into peat	40	
	PNsy	Tainionkoski - 1+0 PNsy in paper pot. Mr. Hallikainen, Nursery Supt.	41	
	PNsy	Tainionkoski - 1+0 PNsy in paper sections		42

	PNsy	Tainionkoski - 1+1 PNsy in transplants lines		43
	PNsy	Tainionkoski - irrigating PNsy - note fine mist		44
	PNsy	Tainionkoski - packing 1+0 PNsy for cold storage (-5 C)		45
		Tainionkoski - packed 1+0 in paper pots for cold storage		46
		Tainionkoski - hexagonal plastic seed containers		47
		Tainionkoski - seed collection using al ladder		48
		Tainionkoski - seed collection using al ladder		49
		Tainionkoski - picking cones from see tree		50a
		Tainionkoski - using al ladder for seed collection		50b
		Tainionkoski - tree bicycle		51
Finland	PNsy	Kayhkaa - 27 km east of Tainionkoski - clear cut 1967-68, planted Sept. with PNsy 1+1+1		52
		Tainionkoski (Enso-Gutzeit - staff house		53
Finland	BEv	Pieksamaki - Foundation for tree breeding - a 5 yr. nursery - 1+1 BEv54		
		Pieksamaki - waterhouse and cold storage		55
		Pieksamaki - permanent greenhouse (plastic) 20 m x 100 m		56
		Pieksamaki - general view inside permanent greenhouse		57a
		Pieksamaki - general view inside permanent greenhouse		57b
	PNsy	Pieksamaki - 1+0 PNsy ready for fall lifting		58
		Pieksamaki - permanent greenhouse		59
	Pla	Pieksamaki - 1+0 Pla in temporary greenhouse - general view		60a
	Pla	Pieksamaki - 1+0 Pla in temporary greenhouse - close-up view	60b	
	Pla	Pieksamaki - 1+0 Pla grown in peat - note high S/R		61
	Pla	Pieksamaki - 1+2 Pla - transplant lines		62
	Pla	Pieksamaki - Pla 1+1 & 1+2 - standard shipping stock		63
	Pla	Pieksamaki - 1+2 Pla shipping stock - note igh S/R		64
		Pieksamaki - roller for making holes for paper pot transplants		65
	PNsy	Pieksamaki - Nisula roll - PNsy 1+1		66
Finland		Suonenjoki Forest Research Institute Nursery - Nisula rolls		67
	PNsy	Suonenjoki - Nisula rolls seeded with PNsy		68a
	PNsy	Suonenjoki - Nisula rolls seeded with PNsy		68b
	PNsy	Suonenjoki - 1+1 PN sy transplanted into Nisula rolls		69a
	PNsy	Suonenjoki - 1+1 PNsy transplanted into Nisular rolls - note roots	69b	
		Suonenjoki - Pentti Nisula		70a

		Suonenjoki - Pentti Nisula with field Nisula roll carrier	70b
		Suonenjoki - Nisula roll carried by planter (now obsolete)	71
		Suonenjoki - radial irrigation (self-propelled) for Nisula rolls	72
		Suonenjoki - steel frame but temporary greenhouses	73
		Suonenjoki - permanent plastic greenhouses	74
Finland		Imari, Rovaniemi - State Forest Nursery - general view	75
	Pla	Imari, Rovaniemi - 1+1 Pla in Nisula rolls - note peat discontinuity	76
	Pla	Imari, Rovaniemi - 1+1 Pla in Nisula rolls	77a
	Pla	Imari, Rovaniemi - 1+1 Pla in Nisular rolls	77b
		Imari, Rovaniemi - treatment chart in beds	78
	PNsy	Imari, Rovaniemi - conventional 1+1 PNsy transplants	79
	PNsy	Imari, Rovaniemi - 1+0 PNsy in paper pots	80
		Imari, Rovaniemi - external frame used to repair rips in plastic house	81
	Pla	Imari, Rovaniemi - Pla 1+0 in peat beds ready for lifting & winter storage	82
	Pla	Imari, Rovaniemi - 1 + ½ Pla in Nisula rolls - note purple symptoms of P. def.	83
		Imari, Rovaniemi - tow-phase peat preparation	84
		Imari, Rovaniemi - inside of Hammer mill peat preparation	85
	PNsy	Imari, Rovaniemi - Nisula roll machine ready for PNsy transplanting	86
		Imari, Rovaniemi - Nisula roll machine	87
	Pla	Imari, Rovaniemi - Pla being transplanted into Nisula roll	88
		Imari, Rovaniemi - greenhouse fertilizer schedule	89
		Imari, Rovaniemi - display set up inside greenhouse by Miss Tuula Anttila	90
		Imari, Rovaniemi - irrigating technique in permanent plastic house	91
		Imari, Rovaniemi - experimental plots in greenhouse - watering & fertilizing	92
		Imari, Rovaniemi - watering study	93
		Imari, Rovaniemi - peat bog drainage	94a
		Imari, Rovaniemi - peat bod drainage	94b
Finland		Lannan Sokeri - Sakyla - general view	95
		Lannan Sokeri - backhoe used for peat drainage	96
		Lannan Sokeri - view of sugar beet plant and Miss Raija Ella & N. Kreiberg	97a

		Lannan Sokeri - sugar beet plant	97b
		Lannan Sokeri - tube planter for paper pots	98a
		Lannan Sokeri - tube planter for paper pots	98b
		Lannan Sokeri - tube planter in use	99
		Lannan Sokeri - Mikko Bergius showing how planter is used	100
		Lannan Sokeri - Power mole & pot carrier	101
		Lannan Sokeri - Paper pot carrier	102
		Lannan Sokeri - company housing	103
		Lannan Sokeri - a sugar factory in the forest	104
		Lannan Sokeri - millstones & M. Bergius, R. Ella & N. Kreiberg	105a
		Lannan Sokeri - millstones of Sakyla	105b
Finland	PNsy	Hietikon - private forest nursery- 2+1 PNsy conventional transplants	106
	BEv	Hietikon - 1+0 BEv in paper pot	107
		no slide	108
		Hietikon - supports for frames of plastic greenhouses	109
	PNsy	Hietikon - 1+0 PNsy in temporary plastic house	110
	PNsy	Hietikon - PNsy in paper pots	111
		Hietikon - clearing more land for plastic greenhouses	112
Sweden	PNsy	Lindhov - PNsy - 100 yr.	113a
	PNsy	Lindhov - PNsy - 100 yr.	113b
		Lindhov - spacing and fertility	114
		Lindhov - Co Tamm, N. Kreiberg & Bo Nilson	115a
		Lindhov - Co Tamm & Bo Nilson	115b
		Lindhov - OSA planting machine development	116
		Lindhov - OSA planting machine - principle of operation	117
		Lindhov - OSA siren tree planter	118a
		Lindhov - OSA siren tree planter	118b
	PNsy	PNsy from Nisula roll planted July 1967	119
			120

Fire Damage Study - 1968

Location	Soil Profile	Description	Date	No.
Can ON		Radar dome, Sioux Lookout - June 1967 fire	Aug. 1968	1
Can ON	Soil # 1	Near Sioux Lookout - burnt 1967 - general view		2
Can ON	Soil # 1	Near Sioux Lookout - burnt 1967 - closer view		3
Can ON	Soil # 1	Near Sioux Lookout - burnt 1967 - close-up		4
Can ON		Ralph Lake near Sioux Lookout - burnt June 1967 - general view	1968	5a
Can ON		Ralph L. near Sioux Lookout - burnt June 1967 - general view	1968	5b
Can ON	Soil #2,3,4	Ralph Lake - 1967 fire		6
Can ON	#2	Ralph L. - dump till - stony sand - general view - 1967 fire		7
Can ON	#2	Ralph L. - note disturbance - ? windthrow		8
Can ON	#3	Ralph L. - dump till		9
Can ON	#4	Ralph L. - clay soil - general view	Aug. 1968	10
Can ON	#4	Ralph L. - clay soil		11
Can ON	#4	Ralph L. - close-up of surface		12
Can ON	#5	Ralph L. - shallow soil/bedrock		13
Can ON	#60	Unburnt - logged 1948 & 1967 - near Sioux Lookout - general view		14
Can ON	#60	Unburnt - logged 1948 & 1967 - near Sioux Lookout - clay soil		15
Can ON	#60	Unburnt - logged 1948 & 1967 - soil pit - clay/sand		16
Can ON	#60	Unburnt - soil pit - near Sioux Lookout		17
Can ON	#61	Near Sioux Lookout - April 1968 fire - general view	Aug. 1968	18a
Can ON	#61	Near Sioux Lookout - April 1968 fire - general view	Aug. 1968	18b
Can ON	#61	Near Sioux Lookout - April 1968 fire - general view	Aug. 1968	18c
Can ON	#61	Near Sioux Lookout - April 1968 fire - view of soil	Aug. 1968	19a
Can ON	#61	Near Sioux Lookout - April 1968 fire - view of soil	Aug. 1968	19b
Can ON		Bruce L. - aerial view of the area		20a
Can ON		Bruce L. - aerial view of the area		20b
Can ON	#13	Bruce L. - general view of esker & unbound moist clays - 1956 fire		21a
Can ON	#13	Bruce L. - general view of esker & unbound moist clays - 1956 fire		21b

Can ON	#7	Bruce L. esker - general view - 1956 fire		22
Can ON	#7	Bruce L. - esker - pine regeneration - 12 years old (1956 fire)		23a
Can ON	#7	Bruce L. - esker - pine regeneration - 12 years old (1956 fire)		23b
Can ON	#7	Bruce L. - esker - pine - 12 years old		24
Can ON	#7	Bruce L. - Esker - view of soil - bouldery sand		25
Can ON	#7	Bruce L. - close-up of soil profile		26
Can ON	#8	Bruce L. - mid slope of esker - general view	June 1968	27a
Can ON	#8	Bruce L. - mid slope of esker - general view	June 1968	27b
Can ON	#8	Bruce L. - detail of soil - 1956 fire		28
Can ON	#9	Bruce L. - general view of pine regeneration		29
Can ON	#9,10,11	Bruce L. - PN b regeneration - general view		30a
Can ON	#9,10,11	Bruce L. - PN b regeneration - general view		30b
Can ON	#9	Bruce L. - esker - out washed sand, med. fine sand		31
Can ON	#12	Bruce L. - 100 year old stand Plm, PNb, Po - some cutting		32
Can ON	#12	Bruce L. - grey wooded, unburnt		33
Can ON	#13	Bruce L. - 100 year + Plm, Po - logged 1949, fire 1956		34
Can ON	#13	Bruce L. - sand/clay - gleyed		35
Can ON		Bug R. - general view - clay, sand and bedrock - 1961 fire		36
Can ON		Job L. - unburned and burned - aerial view		37
Can ON		Job L. - general aerial view especially of unburned		38
Can ON		Job L. - general view of unburned and burned area - aerial view (1935 fire)		39
Can ON	#14	Job L. - view of unburned stand - 105 years old - 40% unburned		40
Can ON	#14	Job L. - unburnt - note moss layer		41
Can ON	#15	Job L. - view of burnt stand, sand/till - 1935 fire		42
Can ON	#15	Job L. - view of soil - 1935 fire		43
		Wavell L. - general view of edge of reburn - 1932 fire		44
	#18	Wavell L. - shallow till/ bed rock - 1932 & 1961 fires		45
	#19	Wavell L. - general view - 1932 & 1961 fires		46a
	#19	Wavell L. - general view - 1932 & 1961 fires		46b
	#19	Wavell L. - soil - bouldery, sandy till - 1932 & 1961 fires		47
	#20	Wavell L. - general view of unburnt 95 year old stand - clay		48
	#21	Wavell L. - general view - clay		49
	#21	Wavell L. - gleyed clay- 1932 & 1961 fires		50

	Trout L. - general aerial view - note burn pattern	51
	Trout L. - aerial view of northeast area near Bear Trap Bay - bedrock ridge - Unburned and burned in 1962 fire	52
#24,25	Trout L. - general aerial view - 1948 & 1962 fire	53a
#24,25	Trout L. - general aerial view - 1948 & 1962 fire - area of pits	53b
#24,25	Trout L. - general aerial view of reburn - 1948 & 1962 fire - exposed rock	54a
#24,25	Trout L. - general view - aerial view of reburn - 1948 & 1962 fire	54b
#24	Trout L. - long channel - general ground view - 1948 & 1962 fires	55
#24	Trout L. - general ground view - 1948 & 1962 fires	56
#24	Trout L. - surface of reburn showing Ae at surface - close-up	57a
#24	Trout L. - surface of reburn showing Ae at surface - close-up	57b
#24	Trout L. - view of soil profile - sand - 1948 & 1962 fires	58a
#24	Trout L. - view of soil profile - sand - 1948 & 1962 fires	58b
#25	Trout L. - general view. Greg Taylor	59a
#25	Trout L. - general view. Greg Taylor	59b
#25	Trout L. - view of regeneration	60
#25	Trout L. - soil pit #25 - note bare surface	61
#26	Trout L., long channel - PN b in bedrock ridge. Greg Taylor	62
#28,29	Trout L., Bear Trap Bay - general aerial view - 1962 fire	63a
#28,29	Trout L., Bear Trap Bay - general aerial view - 1962 fire	63b
#28,29	Trout L., Bear Trap Bay - general aerial view - 1962 fire	63c
#28	Trout L., Bear Trap Bay - unburned stand of 155 year old Plm	64a
#28	Trout L., Bear Trap Bay - unburned stand of 155 year old Plm	64b
	Trout L., Bear Trap Bay - ground view of unburned area from burned Area - 1962 fire	65
#28	Trout L., Bear Trap Bay - showing F-H (13 cm) and moss	66a
#28	Trout L., Bear Trap Bay - showing F-H (13 cm) and moss	66b
	Trout L., Bear Trap Bay - general view of area - 1962 fire	67a
	Trout L., Bear Trap Bay - general view of area - 1962 fire	67b
#29	Trout L., Bear Trap Bay - view of ground surface	68
#29	Trout L., Bear Trap Bay - close-up of ground surface	69
#29	Trout L., Bear Trap Bay - soil profile - note windthrow	70a
#29	Trout L., Bear Trap Bay - soil profile - note windthrow	70b
#29	Trout L., Bear Trap Bay - soil profile - note windthrow	71a

#29	Trout L., Bear Trap Bay - soil profile - note windthrow	71b
#29	Trout L., Bear Trap Bay - soil profile - note windthrow	71c
	Trout L. - general view of bare rock area	72
#32	Obustiga L. - burned and unburned - sand, peat - 1962 fire	73
#32	Obustiga L. - general view - peat	74
#32	Obustiga L. - peat - 1962 fire	75
#33	Obustiga L. - bed rock and peat - general view - 1929 & 1962 fires	76a
#33	Obustiga L. - bed rock and peat - general view	76b
#33	Obustiga L. - general view looking towards the lake	77a
#33	Obustiga L. - general view looking towards the lake	77b
#33	Obustiga L. - regeneration in pockets - 1929 & 1962 fires	78
#33	Obustiga L. - pocket of till (washed) - 1929 & 1962 fires	79
#33A	Obustiga L. - organic material	80
#34	Tarp L. near Pickle L. - note algae bloom - 1936 fire	81
#34,35	Tarp L. near Pickle L. - aerial view - 1930 fire	82
#34	Tarp L. near Pickle L. - PN b, Pl m - 32 years, 128 % stocking	83
#35	Tarp L. - general view - PN b 92 years - 1930 fire	84
	Grace L. - general aerial view - 1962 fire	85a
	Grace L. - general aerial view. - 1962 fire	85b
	Grace L. - closer aerial view of burn - 1962 fire	86a
	Grace L. - closer aerial view of burn - 1962 fire	86b
	Grace L. - closer aerial view of burn and non-burn areas - 1962 fire	87
	Grace L. - ground view of interior of 95 year old stand - note dead and line trees - 1962 fire	88
#36	Grace L. - PN b regeneration	89
#36	Grace L. PN b - 1962 fire	90
#36	Grace L. - boulder till - note windthrow - 1962 fire	91
#37	Grace L. - w. l. sand, Plm, PNb 95 yr ground fire - 1962 fire	92
#37	Grace L. - w. l. sand - note windthrow - 1962 fire	93
#38	Grace L. - stand view - Plm, PNb 98 yr, 70 ft.- unburnt	94
#38	Grace L. - till, sandy loam - unburnt	95
	Blackstone L. - general aerial view - 1961 fire	96
	Blackstone L. - overall view - 1961 fire	97a

	Blackstone L. - overall view - 1961 fire	97b
	Blackstone L. - views of fire boundary - 1961 fire	98a
	Blackstone L. - views of fire boundary - 1961 fire	98b
	Blackstone L. - Aerial view of fire boundary - 1961 fire	99a
	Blackstone L. - Aerial view of fire boundary - 1961 fire	99b
#39,40	Blackstone L. - aerial view of burned and unburned area - 1961 fire	100
#39	Blackstone L. - PNb regeneration	101
#39	Blackstone L. - Plm regeneration - note windthrow	102
#39	Blackstone L. - gleyed sand - note windthrow - 1961 fires	103
#40	Blackstone L. - general stand view - Plm, PNb - 92 yr - 78% - unburned	104
#40	Blackstone L. - unburned - gleyed soil	105
	Perrigo L. - general aerial view of the area - 1942 fire	106a
	Perrigo L. - general aerial view of the area - 1942 fire	106b
#41	Perrigo L. - general aerial view of the area - 1942 fire	107
	Perrigo L. - conventional seedbeds	108
#41	Perrigo L. - general view - shallow/bedrock - 1942 fire	108a
#41	Perrigo L. - general view - shallow/bedrock - 1942 fire	108b
#41,41a	Perrigo L. - PNb 26 yr. - wl. sand - 1942 fire	109a
#41,41a	Perrigo L. - PNb 26 yr. - wl. sand - 1942 fire	109b
	Perrigo L. - wl. sand - 1942 fire	110
	Perrigo L. - aerial view showing fire boundary- 1935 & 1942 fires	111a
	Perrigo L. - aerial view showing fire boundary- 1935 & 1942 fires	111b
	Perrigo L. - aerial view showing fire boundary- 1935 & 1942 fires	111c
#43	Perrigo L. - shallow/bedrock - 1935 & 1942 fires	112
#44	Perrigo L. - Po, PNb - 26 yr - 1935 & 1942 fires	113
#44	Perrigo L. - Po - 26 yr - 1935 & 1942 fires	114
#46	Raggy L. - general ground view - 1961 & 1967 fires	115a
#46	Raggy L. - general ground view - 1961 & 1967 fires	115b
#46	Raggy L. - surface of burn - 1961 & 1967 fires	116

#46	Raggy L. - shallow till/bedrock 1961 & 1967 fire	117
#47	Raggy L. - general view - 1961 & 1967 fires	118
#47	Raggy L. - general view showing more intense burn - 1961 & 1967 fires	119
#47	Raggy L. - 1961 regeneration and 1967 fire	120
#47	Raggy L. - deep sand - 1961 & 1967 fires	121
#48	Raggy L. - general view - kame & moderate burn - 1961 & 1967 fire	122a
#48	Raggy L. - general view - kame & moderate burn - 1961 & 1967 fire	122b
#48	Raggy L. - general view - intense burn - 1961 & 1967 fires	123
#48	Raggy L. - general view - 1961 & 1967 fires	124
#48	Raggy L. - general view of south and southeast - 1961 & 1967 fires	125a
#48	Raggy L. - general view of south and southeast - 1961 & 1967 fires	125b
#48	Raggy L. - looking up kame - very intense fire- 1961 & 1967 fires	126
	Raggy L. - view from top of kame - 1961 & 1967 fires	127
	Raggy L. - view of soil surface of most intense fire	128
#48,49	Raggy L. - fire boundary between #48 & #49	129
	Raggy L. - general view	130
	Raggy L. - view PNb regeneration in 1968 from 1961 fire - 2200 trees	131
#50	Raggy L. - general aerial view - 1961 & 1967 fires	132
#53	Weekday Cr. - general view - shallow till/ bedrock - 1936 & 1961 fires	133
#53	Weekday Cr. - view of PNb & Plm regeneration - 1936 & 1961 fires	134
#53	Slate Falls - general aerial view of shallow/bedrock - 1961 fire	135
#53	Slate Falls - close aerial view of stand PNb, 7 yr, 5 ft tall	136
#54	Forest L. - general aerial view showing fire boundary - 1946 & 1961 fires	137
#54	Forest L. - ground view showing PN b regeneration - 950 trees	138
	Forest L. - medium sand	139
#54	Uchi L. - aerial view - 1942 & 1959 fires	140
#54	Uchi L. - aerial view - 1942 & 1959 fires	140b
#55	Uchi L. - view of regeneration of Po, Bw, Wi, PNb, cherry - 1942 & 1959 fires	141

#55	Uchi L. - soil pit and regeneration - 1942 & 1959 fires	142
#55	Uchi L.	142a
#55	Uchi L.	142b
#55	Uchi L.	142c
#56	Uchi L.	142d
#55	Uchi L. - till/bedrock - 1942 & 1959 fires	143
#56	Uchi L. - general view of vegetation - 1942 & 1959 fires	144
#56	Uchi L. - regeneration - Plm - wl/bedrock	145
#57	Uchi L. - general view - 1942 fire	146
#59	Uchi L. - regeneration - PN b - 1942 & 1959 fires	147
#59	Uchi L. - sandy loam, till/bedrock - 1942 & 1959 fires	148
	Location map	149a
	Location map	149b
	Title - "Effects of fire on soils"	150
	Location of study areas in relation to burns	151
	No slide	152
	No slide	153
	Example of profile description	154a
	Example of profile description	154b
	Graph - ph x years since burn	155a
	Graph - ph x years since burn	155b
	Graph - ph x years since burn	155c
	Graph - depth om x no of burns	156a
	Graph - depth om x no of burns	156b
	Graph - depth om x no of burns	156c
Can ON	Otter aircraft, Jake Seiget & Erling - Sioux Lookout	157
Can ON	Fire northeast of Trout L. , July 1961, Sioux Lookout	158
Can ON	Kennedy Twp. Cochrane - radiant heat - crowning - 1965	159
W. Aust.	Dwelling after Jan 1961 fire in Western Australia	160
W. Aust.	Wildfire crowning in jarrah - eucalyptus marginata	161
W. Aust.	Litter in jarrah (e. marginata)	162
W. Aust.	Litter in jarrah (e. marginata) - note shaggy bark	163
W. Aust.	Jarrah - sequence in recuperation - road to dwellings	May 25/56 164

W. Aust.		Road to dwellings - day after fire	Jan. 27/61	165
W. Aust.		Road to dwellings - 2 months after fire	Mar. 10/61	166
W. Aust.		Road to dwelling - 1 year after fire	Jan. 26/62	167
W. Aust.		Spot fire from incendiary about ½ hour after ignition	1968	168
W. Aust.		Smoke pattern from incendiaries - prescribed burn	1967	169
		No slide		170
		Burt Twp. - general view - cut 1969/70 - PNb - ready to burn		171
		Burt. Twp. - J Irwin & T. Seanger taking soil samples from randomly located Al stakes 1 day before burn		172
		Burt Twp. - T. Seanger taking samples prior to burn		173
		Burt Twp. - Normal slash accumulation before burn		174
		Burt Twp. - Heavy slash accumulation before burn		175
		Burt Twp. - fire May 20/70		176a
		Burt Twp. - fire May 20/70		176b
		Burt Twp. - fire May 20/70 - general view		177a
		Burt Twp. - fire May 20/70 - general view		177b
		Burt Twp. - general view following fire on slope		178
		Burt. Twp. - general view of steep slope following burn - Showing some baring of mineral soil		179
		Burt Twp. - general view 1 week after burn		180
		Burt Twp. - exposure of mineral soil on skidder trail		181
		Burt. Twp. - close-up of exposed mineral soil		182
	#3	Burt Twp. - medium slash following fire		183
	#13	Burt Twp. - Al stake in heavy slash - 1300 F - melted Al stake		184
Can ON		Doon Twp. - Swastika District - cut over west of Matachewan		185
Can ON		Swastika, Doon Twp. - aerial view of fire area 1 week after fire	June 21/72	186a
Can ON		Swastika, Doon Twp. - aerial view of fire area 1 week after fire	June 21/72	186b
Can On		Swastika, Doon Twp. - aerial view of fire area 1 week after fire - low oblique view	June 21/72	187
Can ON		Swastika, Doon Twp. - aerial view		188a
Can ON		Swastika, Doon Twp. - aerial view - mortality in standing timber		188b
		EMV - results of analysis		189
		EMV - results of analysis		190

Can BC	Willow R. Prov. Forest - windthrow after fire - 1961 fire	191a
Can BC	Willow R. Prov. Forest - windthrow after fire - 1961 fire	191b
Can BC	Bowron R. - windthrow after fire	192
USA AZ	Flagstaff - Nov. fire in PNp a day after fire	193
USA AZ	Flagstaff - Nov. fire in PNp	194
	Sunset Crater - PNp roots burning in soil	195a
	Sunset Crater - PNp roots burning in soil	195b
	Sunset Crater - PNp stump burned out	196

Forest Management Audits 1993 -

Location	Description	Date	No.
Iroquois Falls	The Mill - aerial view		1
Iroquois Falls	Twin Falls dam	Aug. 1993	2
Iroquois Falls	Twin Falls dam	Aug. 1993	3
Iroquois Falls	Audit team - P. Griss, E. Rawlinson, J. Williams, J. Gozzoli, K. Armson		4
Iroquois Falls	Audit team plus E. Turk		5
Iroquois Falls	Abitibi-Price - audit team 'at work'		6
Iroquois Falls	Abitibi-Price - C. Gozzoli & E. Rawlinson		7
Iroquois Falls	Abitibi-Price - E. Rawlinson & K. Armson with map of FMA		8
Iroquois Falls	Camp 34 - J. Williams, E. Rawlinson, C. Gozzoli	Aug. 1993	9
Iroquois Falls	Camp 34 - J. Williams, C. Gozzoli, E. Rawlinson at chemical storage room	Aug. 1993	10
Iroquois Falls	Camp 10 area - aerial view - regenerated cut over after 10 years	Aug. 1993	11
Iroquois Falls	Camp 33 Dump Road - regenerated with Plm in 1978 - at 15 years	Aug. 1993	12
Iroquois Falls	Kenning Twp. FTG - note irregular growth	Aug. 1993	13
Iroquois Falls	Rutting damage from too wet soil	Aug. 1993	14
Iroquois Falls	Buried Feller-buncher	Aug. 1993	15
Iroquois Falls	Buries Feller-buncher - closer view	Aug. 1993	16
Iroquois Falls	Camp 10 - aerial view - bladed 1991-92 - note age class	Aug. 1993	17
Iroquois Falls	Camp 10 - bladed & regeneration areas - note age class distribution	Aug. 1993	18
Iroquois Falls	Camp 10 - bladed and regeneration 1991-92	Aug. 1993	19
Iroquois Falls	Timmins Forest Products - PO cut over, bladed - note natural regeneration	Aug. 1993	20
Iroquois Falls	Timmins Forest Products general view of PO cut over - note shoreline reserve	Aug. 1993	21
Iroquois Falls	Aerial view of PO cut over - river reserve - looking towards L. Abitibi	Aug. 1997	22
Iroquois Falls	Lareine aerial view - ABb, cut 1990, SIP & planted with Plm 1991, tended 1992	Aug. 20	23
Iroquois Falls	Lareine - aerial view -cut over & regenerated - ABb cut 1990, SIP (blade) 1991, tended (herbicides) 1992 - note slash	Aug. 20	24
Iroquois Falls	Grand view of slide # 23 & 24. E. Rawlinson & Plm	Aug. 1993	25
Iroquois Falls	Abitibi-Price - Lareine - same as slide # 25		26
Iroquois Falls	Abitibi-Price - Lareine - E. Rawlinson. Cut 1990, planted with Plm 1991,		

	Herbicides 1992		27
Iroquois Falls	Abitibi-Price - Lareine - cut 1990, planted 1991, herbicides 1992. J. Williams, R. Gemmell, E. Rawlinson	1993	28
Iroquois Falls	Abitibi-Price Inc. Close-up of slide # 28	1993	29
Iroquois Falls	Abitibi-Price Inc. - PNb aerially seeded at 8 years		30
New Brunswick	Fraser Inc. freehold - viewing shelterwood for deer	Oct. 1995	31
New Brunswick	Fraser Freehold - Joe Bird	Oct. 1995	32
New Brunswick	Fraser freehold - auditors		33
	Weldwood - 100 Mile House - Peter Johnson of QMI at opening meeting		34
	Weldwood - 100 Mile House - QMI audit team		35
	Weldwood - 100 Mile House - Herb Box of QMI in field audit with operations manager		36

Genetics and Tree Improvement

M. D. Meagher

Forest Type	Description	Date	No.
Quercus robur	Selfing test in Quercus robur		1
Pinus	Controlled pollination in pinus		2
	Pollination bag on		3a
	Pollination bag removed		3b
Douglas Fir	Colour variation in Douglas fir		4
Douglas Fir	Douglas fir near Duncan, BC - 60 years old		5a
Douglas Fir	Douglas fir stem near Duncan, BC		5b
Pinus sylvestris	Poor tree for Christmas tree - too many cones & open form (compare to good one next to it)		6
Pinus sylvestris	Gene for multiple cone production - poor for Christmas tree		7
Q. robur	High grafting to avoid weeds		8
Larix	Grafting of Larix - low grafts, branch habit persists		9
Pine	Red pine grafted in Pinus sylvestris rootstock - note some dying		10
Pine	Red pine grafted in Pinus sylvestris rootstock - tree surviving because branch of rootstock remains?		11
	Side graft of Plg low on rootstock - stock cut back - branching habit of scion remains		12
	Second Plg scion grafted just below tip - stock not cut back - NO branch habit		13a
	Third order scion - grafted just below tip - NO branch habit		13b
Fagus sylvatica	Collecting scions of Fagus sylvatica, Denmark		14
Fagus sylvatica	Hanging variation - grafting - Denmark		15
Larix	Larix hybrids - decidua x leptolepis, Denmark. Sown 1955	June 1964	16
Pine	PNb x PNC - 2 trees from same stand, Alberta		17
Pine	PNb x PNC - hybrids from Alberta - close-up		18
	Pr inbred - 56 selfings - 1 marker gene		19
Pine	PNb - inbreeding - 5 selfings - 4 marker genes		20

Picea glauca	Nursery provenance trial - Picea glauca from BC - showing rep. boundary & 2 reps. of same tall provenance	21
Picea glauca	Nursery provenance trial - Picea glauca (+ P. engelmannii) - view of rep. showing tall strain	22
Picea glauca	same as slide # 22	22b
Picea abies	Picea abies - 1938 provenance trial, seed sown 1940. Marked tree for controlled x's. 24 years of age. Denmark	23
PNb	PNb provenance trial - view from outside	24
PNS	PNS hybrids - maple	25
PNS	PNS & blister rust. Seedlings 3-4 years old with Ribes in bed - some resistance?	26
PNS	PNS & blister rust (a year later) - bed of Pw with 4 seedlings live	27
PNS	PNS & blister rust - grafted stock of resistant seedlings	28
Pinus strobus	Pisgah Forest, NC - Pinus strobus provenance trial - "Quebec" (large) on right vs Iowa (small)	29
PIs	Georgia Pacific Nursery, Cottage Grove, Oregon - grafting in Pis	30
PNS	Orono - graft on PNs - field grafting after 10 years	31
PIg	Red Rock, BC - seed orchard - aerial view	32
PIm	PIm seed orchard in Longlac - established 1958. J. McMahon in PIm	33
PIg	PIg cone crop - Thunder Bay	34a
PIg	PIg cone crop - Thunder Bay	34b
PNre	Mount Lake Twp. 1A, Blind River - 74 year old PNre trees felled to collect cones - spaced	35
	St. Williams Nursery, Simcoe. Rolph Laupert and autumn olive (Eleagnus umbellata) SPA	36
	Weyerhaeuser, Rochester - broken graft in seed orchard	37
	Pacific logging - PSm seed orchard - note spumbler (sp?) to delay flowering and reduce contamination	38
PNre	PEI - PNre - natural form	39a
PNre	PEI - PNre natural forest	39b
PNre	PEI - the 'best' PNre at 65 years	40a

PNre	PEI - the 'best' PNre at 65 years	40b
PO	Leitrim - x PO aspen - POg x a - established 1971 - at 8 years - note form & cankering in foreground vs background	41
PO	Eastern region - x PO at 6 years - note difference in branching habit	42
PO	Eastern region - Sunderland - x PO at 3 years - hybrid trial - DN9 in foreground And DN55 in background	43
	No slides	44-46
PNsy	Larose - considered best form - yet look at regeneration June 1979	47
PIg	Mattawin Seed Orchard - PIg forest - note frost damage	48
PIm	Kingsclear, N.B. - PIm selected seed progeny	49a
PIm	Kingsclear, N.B. - PIm selected seed progeny	49b
PNT	Georgia savannah - new seed orchard for second generation	50
PNT	Georgia savannah - older seed orchard - note grafting	51
PNT	Georgia savannah - Union Camp - controlled pollination	52a
PNT	Georgia savannah - Union Camp seed orchard - controlled pollination	52b
PNT	Georgia savannah - PNT - seed orchard	53a
PNT	Georgia savannah - PNT - seed orchard	53b
	No slides	54-55
PIm	Sioux Lookout - PIm seed orchard established 1982	56
PIm	Swastika - first production full sib PIm (490 m) ready for 1983 planting - rooted cuttings	57
POb	Chaffey's Locks - POB - balsam and poplar	58a
POb	Chaffey's Locks - POB - balsam and poplar	58b
POb	Chaffey's Locks - POB - balsam and poplar	58c
PIm	Bark Lake - Ignace District - progeny testing & seed orchard - established 1982	59
PIm	Ignace District - Ferguson Seed Orchard - PIm - showing irrigation in stock planted 1982 - 0.5 mm gal / day	60
PIm	Ignace District - Ferguson Seed Orchard - ground view of PIm and irrigation guns	61
	Ignace District - Crystal R. - Lambrechts progeny test - established 1982	62
PNre	Sioux Lookout - McIlwraith Twp. - PNre provenance trial	63
PIm	Sioux Lookout - Goody Lake Seed Orchard - PIm planted 1982	64

PNb	Chapleau - grafted PNb from + tree scions for seed orchard	1985	65
	Chapleau Seed Orchard	1985	66
	Manitoba DNR - shade house, Hadashville		67
PIg	Manitoba DNR - seed orchard, Hadashville		68a
PIg	Manitoba DNR - seed orchard, Hadashville		68b
PIg	Manitoba DNR - seed orchard, Hadashville		68c
	no slide		69
	Orono - Vegetative Propagation Centre	Dec. 1986	70
PIm	Orono - grafted PIm (black spruce). Bill Baker & Glen McLeod		71
PNs	Orono - grafted PNs (white pine) in overwintering house		72
spruce	Orono - Spruce clonal trial - note growth difference		73
PIm	Orono - clonal spruce trial - note growth differences		74
White pine	Orono - selected white pine trial - note difference in form	1986	75
PIm	Moonbeam - Phillin Nursery - x PIm cutting facility - aerial view		76a
PIm	Moonbeam - Phillin Nursery - x PIm cutting facility - aerial view		76b
PIm	Moonbeam - Phillin Nursery - x PIm - cuttings in house		77
PIm	Moonbeam - Phillin Nursery - x PIm - cuttings and parent stock		78
PIm	Moonbeam - Rosaire Phillin and John DeWitt - PIm orchard - cuttings and parent stock		79
PIm	Moonbeam - Phillin Nursery - sorting x PIm cuttings	Oct. 28/87	80
PIm	Moonbeam - general view of x PIm cuttings	Oct. 1987	81a
PIm	Moonbeam - general view of x PIm cuttings	Oct. 1987	81b
PIm	Moonbeam - PIm - second generation cutting		82
PIm	Moonbeam - x PIm - 2 years old. Nick Saltarelli	Oct. 1987	83
	Chapleau - Island Lake Seed Orchard		84
PNb	Chapleau - Island Lake Seed Orchard - PNb families		85a
PNb	Chapleau - Island Lake Seed Orchard - PNb families		85b
PO	Allandale - x PO at 16 years - planted 1971	1987	86a
PO	Allandale - x PO at 16 years - planted 1971	1987	86b
PIm	Allandale - clonal PIm (black spruce) from Geraldton		87
Pla	Allandale - Norway spruce (Pla)		88

Picea montagera	Allandale - Picea montagera		89
PNs	Huronía - Glencairn Seed Orchard - PNs planted 1938	1987	90
PIg	Huronía - Glencairn Seed Orchard - PIg planted 1972	1987	91
PNs	Niagara - Salix Plantation - PNs planted 1981	1987	92
PNs	Niagara - Salix Plantation - PNs planted 1981	1987	92b
	Niagara - Salix Plantation - LA leptolepis planted 1977 - note stem form	1987	93
Larch	Niagara - Salix plantation - larch (larix) trials		94
Larch	Niagara - larch trials - LA decidua from Quebec - note sweep		95
	Niagara - Salix Plantation - LA decidua x leptolepis - planted 1977	1987	96
PIg	Niagara - PIg - Orono seed tree planted 1978	1987	97
PNre	Petawawa - PNre - normal and fastigate form (grafts)		98
Pinus radiata	Clonal variation in radiata pine (California)		99

GEOLOGY & LAND FORM SLIDES
(Kenneth A. Armson R.P.F.)

Location	Description	Date	No.
USA OR	Eocene clay loam - pillow lava		1
Can ON	Mesa - basalt & sed. red rock, Nipigon, Ont.		2
Can ON	Basalt mesa - Mt. McKay, Ft. William, Ont.		3
Can ON	Precambrian granite gneiss - French R., Ont.		4
Can ON	Perched erratic - granite gneiss, Parry Sound, Ont.		5
Can ON	Precambrian synclines - L.Traverse, Algonquin Park		6
	Granite gneiss		7
	Conglomerate - Kenogami		8a
	Conglomerate - Kenogami		8b
	Conglomerate - Kenogami		8c
Can ON	Little clay belt - Lake Barlow, New Liskeard, Ont.		9
Can ON	Niagara Escarpment at Milton, Ont. on Hwy. 401	Feb. 1961	10a
Can ON	Niagara Escarpment at Milton, Ont. on Hwy. 401		10b
Can ON	Interlobate moraine - S. Ontario		11
Can ON	Interlobate moraine - Aurora, Ont.		12a
Can ON	Interlobate moraine - Aurora, Ont		12b
Can AB	Terminal moraine - near Stettler, Alberta		13
Can ON	Dunes - sandbanks - Prince Edward County	June 1957	14
Can ON	Drumlin - S. Ont.		15
	Kame - general view		16
	Kame - near top		17
	Kame - stratified sides		18
	Compacted till		19
	Esker		20
	Glacio-fluvial sands and gravels		21
	Shoreline sands		22
	Shallow till/crystalline bedrock		23

	gravel and medium sand - discontinuity - Forbes Cr.		24
USA ME	Northern Maine - Appalachians		25
	Livingstone Range - Rocky Mountains		26
Can ON	Eroded peneplain - Algonquin Park		27a
Can ON	Eroded peneplain - Algonquin Park		27b
Can ON	Silvian rock - Niagara		28
Can ON	Precambrian shield and weather front - Cobalt - Temagami		29
Can ON	Claremont Conservation Area	May 1970	30
	Tillite - Elk L. Hwy. - Charlton		31
	Drumlin (farm & fall wheat) - Richmond Hill, Ont.		32
	Fluvial gravel capped by windblown sand		33
	Dunmore - cross bedding in dune		34
Can ON	Dunmore - cross bedding in dune - close up		35
	Bedrock outcrop		36
USA FL	Sand and piedmont clay - North Florida		37a
USA FL	Sand and clay - North Florida		37b
USA FL	Sand and clay - North Florida		38a
USA FL	Sand and clay - North Florida		38b
Can ON	Don Valley brickworks - Scarborough		39
	Esker - Kirkfield		40a
	Esker - Kirkfield		40b
	Esker - Kirkfield		41a
	Esker - Kirkfield		41b
Can ON	Drumlin		42
Can ON	Fractured bedrock - escarpment at Collingwood - Lockport, Guelph		43
Can ON	Boulder pavement - Killbear Park, Parry Sound		44
	Lac St. Jean area - Kelthe Lake		45
Can BC	Dump/basal till - Lost Creek, BC Mission		46
Can BC	Fluvial gravel - Pt. Renfrew, B.C.		47
Can AB	Ram Falls, Alberta		48a
Can AB	Ram Falls, Alberta		48b

Can AB	The Rockies		49a
Can AB	The Rockies - tilted sediments		49b
Can AB	N. Saskatchewan R. - near Grade Cache		50
Can AB	The Rockies		51
Can AB	The Rockies		52
Can ON	Onaping Falls, north of Sudbury		53
Can ON	Iroquois Falls FMA - fen bog - general view		54a
Can ON	Iroquois Falls FMA - fen bog - close up		54b
Can ON	Pukaswa National Park - L. Superior coastline		55a
Can ON	Pukaswa National Park - L. Superior coastline		55b
Can AB	Lesser Slave Lake near Slave Lake	June 1995	56a
Can AB	Slave Lake from Marten Mountain Lookout	June 1995	56b
Can AB	Rocky Mountains and foothills from the air		57a
Can AB	Rocky Mountains and foothills from the air		57b
Can ON	Humber river and valley - flood plain - at Kortwright Ave.		58

LAND USE SLIDES
(Kenneth A. Armson R.P.F.)

Location	Description	Date	No.
Can ON	Tile drainage - nursery #308 near Leamington, Ontario	1969	1
Can ON	Wilket Creek Park, Toronto		2a
Can ON	Wilket Creek Park, Toronto		2b
USA NC	Strips of millet for quail in longleaf pine, Sandhills, NC		3
Can ON	Smelter gases - seen from Hwy 69		4
	Smelter gases - Coniston in Precambrian shield		5
	Smelter damage - barren road, Coniston		6
Can ON	Gold mine at Balmertown, Ontario		7
Can ON	Iron ore pelleting, Bruce Lake Mine, Red Lake	July 1968	8
Guatemala	Land clearing - shifting cultivation, Guatemala		9
Africa	Shifting cultivation, clearing in Shamba, Kenya		10
Africa	Shifting cultivation, clearing in Shamba, Kenya		11
Africa	Terraced lands, Machokos, Kenya		12a
Africa	Terraced lands, Machokos, Kenya		12b
Africa	Close-up of terraced fields, Machokos, Kenya		13
Africa	Field pattern - general view, Kenya		14
	no slide		
Can BC	Irrigated hay meadow, Vernon, BC		16
Can BC	Irrigated pasture, Vernon, BC		17a
Can BC	Irrigated pasture, Vernon, BC		17b
Can AB	Hereford range near Drumheller, Alberta		18
Can AB	Rangeland on Banff Highway west of Calgary		19a
Can AB	Rangeland on Banff Highway west of Calgary		19b
Can MB	Winnipeg subdivision		20
Can ON	Hwy 401 & Spadina Ave., Toronto - aerial view		21a
Can ON	Hwy 401 & Spadina Ave., Toronto		21b
Can ON	Toronto from TD tower		22
Can ON	Don Valley Parkway and Hwy 401, Toronto - aerial view		23
USA MA	Dinosaur footprint, Hadley, Mass.		24

USA NC	Cotton plants with flowers, North Carolina	Aug. 1968	25
USA	Columbia River		26a
USA	Columbia River		26b
USA WA	Inland empire, Columbia basin		27
USA WA	Wheat, Horse-heaven Hills, Washington		28
USA WA	Irrigating pasture, Columbia River basin interior		29
Can AB	Strip cropping in wheat, Pincher Creek, Alta		30
Can AB	Strip cropping in wheat, Central Alberta - aerial view		31
Can SK	Wheat farming, Saskatchewan - aerial view		32
Can AB	Grain elevators near Irricana, Alta		33
Can SK	Salt lands, Saskatchewan - aerial view		34
Can AB	Salt lands (sloughs), Alberta - aerial view		35
Can AB	Salt lands, Alberta - aerial view (Roads 1 mile apart)		36
Can ON	Farmland north of Toronto, Humber E. in foreground		37
	Forest/farmland in Maine/New Brunswick - aerial view. (Covered bridge)		38
Can ON	Shield forest, Northwestern Ontario		39a
Can ON	Shield forest, Northwestern Ontario		39b
Can QC	Land use patterns, Eastern Townships, Quebec		40
Can QC	Land use patterns, Eastern Townships, Quebec		41
Can NB	Land use patterns, Buctouche River, New Brunswick		42
Can NB	Land use patterns, towards Harcourt, NB		43
Can SK	Land use - Waskesiu camping area, Prince Albert National Park, Sask.	Sept. 1964	44
Can NB	Saint John R. below Gagetown, NB - farmland abandoned		45
Can NB	Abandoned farm house overlooking the Saint John R., NB		46
Can SK	Abandoned early farm house, near Batoche, Sask.		47
USA MA	Old stone fence and fields abandoned in 1850's, Harvard Forest		48a
USA MA	Old stone fence and fields abandoned in 1850's, Harvard Forest		48b
Can NL	Old stone fence - abandoned, exposure, Newfoundland		49
Can ON	Little clay belt north of New Liskeard		50
Britain	Reclaimed heath land, New Forest, UK		51
Can On	Abandoned farm 20 mi. N W of Cochrane - cleared in 1908		52
Can NB	Farmland near Centreville, NB		53a
Can NB	Farmland near Centreville, NB		53b
Africa	Forest in ridges, Aberdare Mt., Kenya		54

USA TN	Landscape, southern Appalachians, Tennessee - Hills - extensive land use & valleys - intensive land use		55
Japan	Tokyo University Forest settled since 1940, Yamabe, Hokkaido		56
Can ON	Split rail white pine fence, Parry Sound		57
	Depot Harbour, Parry Island - abandoned		58
	Depot Harbour, Parry Island - abandoned		59a
	Depot Harbour, Parry Island - abandoned		59b
Can ON	Marginal farmland - shallow/br, near Minden, Ontario		60
	Abandoned farm in drumlinized till		61
	Farming in medium-fine sand, Gelert		62
	Farming in medium-fine sand; PN's stump fence, Gelert		63
Can QC	Stream gauging - Foret Montmorency Station, QC		64
	Continental Road - Harvard Black Rock Forest & West Point cadets on maneuvers	1913	65a
	Continental Road - Harvard Black Rock Forest & West Point cadets on maneuvers	1913	65b
	Continental Road - Harvard Black Rock Forest	1968	66
Can ON	Huron Indian longhouse, Midland	Aug. 1970	67
Can ON	Huron Indian garden, Midland	Aug. 1970	68
Africa	Banana crop - Ivory Coast		69
Can ON	General view from Rattlesnake Pt. (Niagara Escarpment)		70
USA NC	Avery Creek watershed, Southwestern Mountains near Asheville, NC		71
Can ON	Climatic regions of Southern Ontario		72
Can ON	Climatic regions of Northern Ontario		73
Can ON	Mean annual EVT for Northern Ontario		74
Can ON	Hwy 35 south of Lindsay - what direction?		75a
Can ON	Hwy 35 south of Lindsay - what direction?		75b
USA NC	Appalachian hillside - ridge-top road, North Carolina		76
USA NC	View of Asheville from east, North Carolina		77
USA PA	Western Pennsylvania south of Waynesburg		78
Can ON	Rich Hearn Generating Station, Toronto		79
Sweden	Southern Sweden - town and farms		80
Finland	Finnish archipelago off Turku		81
Finland	Farm and forest intermix north of Turku, Finland		82

Can NS	Cape Breton farmland	83
Can NS	Nova Scotia landscape	84
USA	Timestra Area, Allegheny National Forest	85
USA	Logging and recreation road, Allegheny National Forest	86
USA	Oil pipeline, Allegheny National Forest	87a
USA	Gas & oil pipeline in Timestra Scenic Reserve	87b
Can QC	Making charcoal, St. Raymund, Quebec	88
England	Aerial view Surrey, England	89
England	Map of New Forest	90a
England	Map of New Forest	90b
England	Map of campsites - New Forest	91
England	Regulations for campers - New Forest	92
England	New Forest by-laws	93
England	Forest Commission Information Trailer at Lyndhurst campsite, New Forest	94
England	The forest at New Forest	95
England	Forest with Lyndhurst in distance, New Forest	96
England	Pony, New Forest	97
England	Pine plantations, New Forest	98
England	Beech hardwood enclosure, New Forest	99a
England	Beech hardwood enclosure, New Forest	99b
England	Oak plantations, New Forest	100
England	Caravans, New Forest	101a
England	Caravans, New Forest	101b
England	Podzol profile, New Forest	102a
England	Podzol profile, New Forest	102b
Can ON	Welland Canal	103
Can On	Sherman iron ore mine, Temagami	105
Can On	Tailing ponds, Sherman mine, Temagami	106
Can On	Pine plantations near Cambridge area	107
France	Small rural holder, Les Lades, France	108
France	Small holder, Les Lades, France	109
France	French countryside between Perigueux and Bordeaux	110

France	Heath land of Limousin & central Massil, Razes		111
France	Reforestation of heath land - soil profile, Razes		112
France	Old field and heath land, stone fence, Razes		113
USA OR	Forestry & grazing, Williamette Valley, Oregon		114
USA NY	Compaction and erosion around a campsite, Adirondacks	1975	115
Can AB	Elk Island National Park, Alberta - parking for campers		116
Can ON	Aerial view - railroad, hydro, forest, Atikokan		117
Can ON	Steep Rock Iron Mine, Atikokan		118a
Can On	Steep Rock Iron Mine, Atikokan		118b
Can ON	Steep Rock Iron Mine, Atikokan		118c
Can NB	St. John River valley at Florenceville, NB		119a
Can NB	St. John River valley at Florenceville, NB		119b
Can AB	Farming - Lesser Slave Lake		120
Can AB	Pumper and tank in forest at Swan Hills, Lesser Slave Lake		121
Can AB	Hydro reservoir, Lake Abraham, The Rockies		122
Can AB	Barge on Athabasca R. at Ft. McMurray		123
Can AB	5 million tonnes of sulphur aquitaine near Rocky Mountain House		124a
Can AB	5 million tonnes of sulphur aquitaine near Rocky Mountain House		124b
Can AB	5 million tonnes of sulphur aquitaine near Rocky Mountain House		124c
Can AB	Oil rig in the forest, Alberta		125a
Can AB	Oil rig in the forest, Alberta		125b
Can AB	Cattle downstream from L. Abraham		126
Can AB	Coal mine, Cardinal, Alberta		127
Can AB	Rocky Mountain sheep, Cardinal		128a
Can AB	Rocky Mountain sheep, Cardinal		128b
Can AB	Rocky Mountain sheep, Cardinal		128c
Can AB	Rocky Mountain sheep in mine spoil, Cardinal, Alberta		129a
Can AB	Rocky Mountain sheep in mine spoil, Cardinal, Alberta		129b
Can AB	Rocky Mountain sheep in mine spoil, Cardinal, Alberta		129c
Can AB	Lake Louise and forests		130a
Can AB	Lake Louise		130b
Can AB	Sunshine Valley, Banff		131

Can AB	St. Regis Alberta Bighorn Trail		132a
Can AB	St. Regis Alberta Bighorn Trail		132b
Can AB	St. Regis Sculpture Trail		133
Can AB	St. Regis Sculpture Trail		134
Can AB	Mountain stream, St. Regis		135a
Can AB	Mountain stream, St. Regis		135b
Can AB	Mountain stream, St. Regis		135c
Can BC	Nitmat Lake		136a
Can BC	Nitmat Lake, Pt Albernia		136b
USA GA	Clearcut for Pine planting and agricultural land in 1769 & 1773		137
Can ON	Ontario Paper Co., Morin Village, Garibaldi Township		138a
Can ON	Ontario Paper Co., Morin Village, Garibaldi Township		138b
Can ON	Shebandowan CMV, Lake Shebandowan		139
Can ON	Hemlo gold field	1984	140
Can ON	Hemlo gold field		141
Can On	Hemlo gold field		142
Can ON	Hemlo gold field		143
Can ON	Hemlo gold field, Noranda Mine		144
Can BC	Juan de Fuca Strait on road to Pt Renfrew, Sombrio River		145
Can ON	Georgian Bay Islands south of Parry Sound		146a
Can ON	Georgian Bay Islands south of Parry Sound		146b
Can ON	Elmvale		147
Can NB	Larry's Gulch and Restigouche River	July 1986	148
Can ON	Humber Valley - Kortright Centre		149
Can ON	Kapuskasing - town dump - aerial view	1987	151a
Can ON	Kapuskasing - town dump - aerial view	1987	151b
Can ON	Aerial view of town and mill, Dryden	May 1988	152
Can AB	Prairie north of Drumheller	Oct. 1989	153
	no slides		154 -158
Can	Landsat - Woodland Cariboo Park - note fire areas '61, 74, 80		159
Can ON	Landsat - NW Red Lake - fire '61,74,80 & 86 and also cutovers		160
Can ON	Landsat - Missinaibi L., Ontario		161
Can ON	Landsat - L. Abitibi, Iroquois Falls, NE Ontario		162
	Landsat - large scale of forest		163a

	Landsat - large scale of forest		163b
USA ME	Harris Dam on Kennebec River and S. D. Warren timberlands - note cutover opening	164	
Can BC	South of Chilliwack near US border - general view		165a
Can BC	South of Chilliwack - farms & forests	Apr. 1995	165b
Can On	Near Napanee - juniper taking over old field		166a
Can ON	Near Napanee - juniper taking over old field		166b

North Carolina Trip 1969

Forest Type	Description	Date	No.
	K. A. Armson, Forestry		
	J. L. Farrar at Buffalo, N.Y. border		1
	J. L. Farrar & Dick Mannisto at Buffalo, N. Y.		2
P. taeda	Students at Carl Schenck Forest looking at loblolly pine		3a
P. taeda	Students at Carl Schenck Forest looking at loblolly pine		3b
P. taeda	Schenck Forest, Raleigh, N.C.		4
P. taeda	P. taeda with heavy undergrowth at C. Schenck Forest		5a
P. taeda	P. taeda with heavy undergrowth at C. Schenck Forest		5b
P. taeda	Fusiform rust gall in loblolly, C. Schenck Forest		6a
P. taeda	Fusiform rust gall in loblolly, C. Schenck Forest		6b
P. taeda	Students in loblolly seed orchard - C. Schenck Forest		7
P. taeda	P. taeds seed orchard in C. Schenck Forest		8
Pl taeda	Grafted P. taeda seed orchard tree		9
	Cecil loam - eroded phase		10a
	Cecil loam - eroded phase		10b
	Cecil loam - eroded phase		10c
P. palustris	Sandhills Forest - P. palustris with hardwood understorey		11
P. palustris	Sandhills Forest - longleaf	Feb. 18/69	12
P. palustris	Sandhills Forest - longleaf pine seedlings	Feb. 18/69	13
P. palustris	Sandhills Forest - students in P. palustris - burned Dec. 1969	Feb. 1969	14
P. palustris	Sandhills Forest - Longleaf pine burned Dec. 1969 - burned in 3 year cycle	Feb. 1969	15
P. palustris	Sandhills Forest - Longleaf pine - burned Dec. 1969	Feb. 1969	16a
P. palustris	Sandhills Forest - note ice & snow breakage		16b
	Sandhills Forest - paleoudult plinthite paleogley		17
P. palustris/P.taeda	Sandhills Forest - ice storm damage to longleaf and loblolly		18
P. palustris	Sandhills Forest - sleet & ice damage to longleaf pine		19
P. palustris/P.taeda	Aberdeen, N.C. - ice storm damage to longleaf and loblolly pine		20

P. palustris/P.taeda	Aberdeen, N.C. - ice storm damage to longleaf and loblolly pine		21
	Greenboro, N.C. - general view of Clarridge Nursery		22
P. taeda	Clarridge Nursery - front sign.		23
P. taeda	Clarridge Nursery - 1+0 loblolly beds being lifted		24
P. taeda	Clarridge Nursery - 1+0 loblolly beds - note purpling and pine straw		25a
P. taeda	Clarridge Nursery - 1+0 loblolly pine - note "fall" purpling	Feb. 1969	25b
	Clarridge Nursery - seedbed lifter		26
P. palustris	Clarridge Nursery - longleaf pine straw baled for use in Clarridge Nursery. Bob Mitton		27
	Clarridge Nursery - weighing, "mud packing" and baling inside shed		28a
	Clarridge Nursery - weighing, "mud packing" and baling inside shed		28b
	Trenton, N. C. - Spanish moss		29
	Trenton, N. C. -Bald cypress & Spanish moss	Feb. 9/69	30
	Trenton, N. C. - bald cyress & Spansih moss		31
P. taeda	Trenton, N. C. - Hofmann Forest - loblolly pine on poorly drained land	32	
P. serotina	Hofmann Forest - pond pine		33
P. serotina	Hofmann Forest - pond pine on a pocosin		34
	Hofmann Forest - pocosin		35
	Hofmann Forest - R. J. Day on pocosin		36a
	Hofmann Forest - R. J. Day on pocosin		36b
	Hofmann Forest - Albemarle Paper Co. - pettibone slasher	Feb. 1969	37
	Hofmann Forest - Albemarle Paper Co. - hydraulic shears		38
	Hofmann Forest - Albemarle Paper Co. - pettibone slasher	Feb. 1969	39
	Hofmann Forest - Albemarle Paper Co. - Beloit skidder (with choker) hauling tree lengths to pettibone slasher	Feb. 1969	40
	Hofmann Forest - Albemarle Paper Co. - hauling 5 ft. pulpwood from poor Pond Pine stand		41
	Hofmann Forest - Albemarle Paper Co. - cut over after Marden chopper Ready for baling		42
	Hofmann Forest - bedding with Rome disks		43
	no slide		44
	Hofmann Forest - bedding with Rome disks		45
	Hofmann Forest - close-up of bedding with Rome disks		46
	Hofmann Forest - general view of bedded areas		47a

	Hofmann Forest - burned and bedded areas		47b
	Hofmann Forest - close-up ob burned and bedded areas		48
P. taeda	Hofmann Forest - 1+0 P. taeda 3 yeqrs after planting in edded land		49a
P. taeda	Hofmann Forest - 1+0 loblolly e years after planting		49b
P. taeda	Hofmann Forest - loblolly 3 years after planting on bedded land		49c
P. palustris	Croatan National Forest - cut over, chopped & planted with longleaf	Feb. 1969	50
P. palustris	Croatan National Forest - longleaf pine planted		51
P. palustris	Croatan National Forest - longleaf plus tree		52
P. palustris	Croatan National Forest - longleaf burned Jan. 1969	Feb. 1969	53
	Croatan National Forest - bamboo thicket, oak in foreground		54
	Croatan National Forest - bamboo & R. J. Day		55
	Croatan National Forest - bamboo close-up		56
	Croatan National Forest - Dibble tree planter - built 1967-68		57
	Croatan National Forest - Dibble tree planter		58
	Croatan National Forest - Dibble tree planter - close-up		59
	Outer Banks, N. C. - dune stabilization with beachgrass		60

Norway, 1976

Location	Forest Type	Description	Date	No.
Oslo		Sogsvaen Park - note dead BE		1
		Sogsvaen Park - logs & stump		2
		Sogsvaen Park - logs		3
	BE	Sogsvaen Park - dying BE from overuse		4
		Sogsvaen Park - note clear cuts across lake		5
	PNsy	Sogsvaen Park - PNsy on peat - seed tree in original soil		6
	PNsy/BE	Sogsvaen Park - PNsy seed tree on peat with BE regeneration	7	
	Pla	Sogsvaen Park - planted Pla		8
	Pla	Sogsvaen Park - planted Pla - note age class groups		9
		Sogsvaen Park - note species distribution		10
	Pla	Sogsvaen Park - planted Pla in spring and competition removal	11	
	Pla	Sogsvaen Park - planted age class		12
		Sogsvaen Park - clear cutting		13
		Sogsvaen Park - oldest age class & clear cutting		14
		Sogsvaen Park - oldest age class & clear cutting		15
		Sogsvaen Park - rocks for people		16
		Sogsvaen Park - a forest outing for children		17
	BEa/Pla	Sogsvaen Park - Nurse BE a & Pla planted		18
	Pla/BEa	Sogsvaen Park		19
	Pla	Sogsvaen Park - clearing in Pla		20
	Pla/BEa	Sogsvaen Park - Pia planted in Bea		21
		Sogsvaen Park - people		22a
		Sogsvaen Park - people		22b
	PNsy	IUFRO tour - PNSY 99 yr., vol. 133 cubic metres/ha - fertilized 1945, thinned 1956 & every 6 years since, age now 130 yr.		23
	PNsy	IUFRO tour - PNsy fertilized 1945 and every 6 years since, age now 130 yr.		24
	PNsy	IUFRO Tour - cross-section of PNsy now 130 years old		25a
	PNsy	IUFRO tour - upper bole		25b
	PNsy	IUFRO tour - PNsy fertilized at 99 years, now 130 years	26	

	PNsy	IUFRO tour - crowns of 130 yr trees		27
	PNsy	IUFRO tour - 34 year old PNsy - 2 metre spacing. Geo. Stoebler		28
	PNsy	IUFRO - Solena - 1.6 m spacing		29
	PNsy	IUFRO - Solena - 2.5 m spacing		30
	PNsy	IUFRO - Solena - PNSY control		31a
	PNsy	IUFRO - Solena - PNsy control		31b
	PNsy	IUFRO - Solena - precommercial, thinned at 13 years, now 34 years old		32
Norway	PNsy	IUFRO - Adal - PNsy fertilized at 45 years, inc. 2-3.5 cubic metres/ha/yr - now 51 years old		33
	PNsy	IUFRO - Adal - PNSY fertilized at 45 years, now 51 years	34	
	Pla	IUFRO - Vardal - 19 year old Pia, thinned at 14 years		35
	Pla	IUFRO - 19 year old Pia, thinned at 14 years		36
	Pla	IUFRO - Vardal - 19 year old Pia, thinned at 14 years		37
	Pla	IUFRO - Veldre - 80 - 100 year old Pia - note crown shape	38a	
	Pla	IUFRO - Veldre - 80 - 100 year old Pia - note crown shape	38b	
	Pla	IUFRO - Veldre - 80 - 100 year old Pia - note crown shape	38c	
	Pla	IUFRO - Veldre - fertilization of old stands		39
	Pla	IUFRO - Veldre - hard fertilized - NH4NO3 - at \$38.50/ac	40a	
	Pla	IUFRO - Veldre - hard fertilized @ \$38.50/ac		40b
	Pla	IUFRO - Veldre - hard fertilized @ \$38.50/ac		40c
		IUFRO - clear cut		41
		IUFRO - windthrow in 1971 and salvage clear cut		42
		IUFRO - general forest view with cutting in the windthrow	43	
	Pla	IUFRO - 41 year old Pia		44a
	Pla	IUFRO - 41 year old Pia		44b
		IUFRO - general view of logged area		45
	PNc/Plm	IUFRO - PNc and Plm planted on organic soils		46a
	PNc/Plm	IUFRO - PNc and Plm planted on organic soils		46b
Northern Norway		IUFRO - Podsol at Sandmoen		47
		IUFRO - clear cut or 300 ha - private farm forest		48a
		IUFRO - cut over		48b

SITE PREPARATION EQUIPMENT

Equipment	No.	Effects	No.
Bracke	1U, 2Z, 3F, 3I, 3j, 3K, 3L, 5R, 5X	5J, 5K, 5W, 5Y	
Flange & Flange & Shark-fin barrels	4V, 7K, 7L, 7M, 8G, 8R, 8S, 8U, 8V, 8X	Flange barrels Flange seed barrels - Geraldton Flange barrel scarification furrow	1Ka IKb 5B, 5C, 5L, 7N 7O 7P, 7Q, 7W, 7X, 7Y
Marttiini Plough	1Q, 3A, 3B, 3C, 3H, 6M, 6N, 6O	Marttiini in clay	1Z 3N, 3O, 3P, 3Q, erosion fill in 3R 3S, 3T, 3U, 6P, 6Q
Miscellaneous 1	1G 1I 1R, 1S, 1T, 1V 2K 2L 2M shark-fin barrel shark-fin	Description Shear blade corridor Ignace - 15 years after burn & dried seeding Burned & seeded - PNb after 15 years Burned & seeded PNb after 15 years	

Clark 880	2U 3D, 3E, 3G, 3M, 3Z, 4S, 5M 7G 7H, 7R, 7S, 7Z, 8B, 8C, 8E, 8F, 9X	Blowdown
Ripper - D8H - cat power unit	10L 10M, 10N, 10S, 110, 111, 113, no number	
Miscellaneous 2		
Marttiini - foreground & shear blade - background	1J 1N 1O, 2A, 2D, 2E, 4Z	Proposed for Young's Teeth
Bulldozer & straight blade	5A, 5N, 6F, 6I, 6J 6S, 6T, 6Z, 8P, 9B 9C 9U, 9Z, 19B, 10F, 10X	Ripper testing Young's teeth corridor
Miscellaneous 3		
shark-fin barrels	1A	
shark-fin barrels & spiked and/or chains	1B	
shark-fin or flange barrels	1E 2F	
shark-fin on 35% slope	2W	
shark-fin	2X 4A, 4B, 4E, 4F, 4L, 4N, 4O, 4P,	

shark-fin	4Q 4R
flange barrels	4T,4W, 5S, 5Q 7I 7J
shark-fin & flange barrels	8D 8H, 8I, 8J, 8K, 8N, 8O, 8Y, 9M, 9P

Ploughs

V-Blade corridor	1W
V plow - Cochrane	1X 11B

Shear blade	1La 1Y, 2B, 3Y, 5Z
Shear blade	6A 6B, 6C, 6D

Rippers

ripper furrow	10K 11E, 114, 115, 117
---------------	---------------------------

Shark-fin barrels

4C, 4D, 4I, 4J, 4K, 8L, 8M, 8W

Effects

P.B. & barrels

shark-fin in shallow sort

9V, 9W, 119 No number

1F 1H 1P, 2G, 2H, 2I, 2J

shark-fin in shallow & rocky site	2N
2O 2P, 2S, 2T, 2V, 2Y, 4G, 4H, 4U, 5D, 5E 5O, 5P, 5T, 5U, 5V,	

		7T, 7U, 8T, 9N, 9Q, 9R, 9S
Straight blade convector	6G, 6H	6E, 6K, 6L
TTS	6V, 6X	6W, 6Y, 7A, 7B
TTS furrow	7D 7F 9H, 9Y, 10A, 10C, 10E, 10G, 10 h, 10I, I5	7C, 7E, 9E, 9F, 9G, 9I, 9J, 9K, 9L, 9T, 10C, 10D, 10O, 10P, 10Q, 10R, 10S, 10T, 10U, 10V, 10W,
TTS mixed furrow	I7 no number	
	Mixed furrow	11C
	Canadian detachable TTS teeth	11F 11G I2, I2, I4, I31, I32, I38 No number No number
	regular TTS teeth	
Young's teeth	4X, 4Y, 9D	5F, 5G, 8Q, 8Z, 9A

Tree Slides

No.	Description	Date	Plot #
Box 1			
2	Plot on ? In cut spruce with pine type, typical cover. White pine in right corner	July 14/94	28
2	East ? ? - Mc Niece Pond. Black spruce & jack pine up to Pw on top.	July 23/54	
3 - 4			
4	6 ft. 6 in. stock in soil pit in ?, North end McNiece Pond, washed boulders with white spruce ? forest type - ?.	July 23/54	80
5	Cedar Po - black spruce. Cover of black spruce cedar type. East S Norway Pt.	July 19/94	32
7			
10	General stand ? of 70 year jack pine - black spruce on white pine - black spruce type	July 23/54	51
10	Black spruce slope - Long Lake. Good!		
12	Cedar, spruce - Long Lake. Good scarp, poor colour		
13	White cedar, white pine, white spruce and balsam fir - white cedar type. East side Norway Pt.	July 19/94	41
16	Ground cover and young growth. 35 year cover on white pine - black spruce type East Bay ?	July 19/51	37
17			

17	Ground cover understory 90 years on white pine - black spruce type. Note jack pine needles and moss	July 17/54	38
18			
18	Birch		
19	Birch		
20			
21	? contrasting in ? Pw - black spruce F. r. West side Norway Pt.	July 28/54	61
Box 2			
3	Crataegus monogyna stricta - tree form - 15 ft.		
4	Prunus - Kwanzan cherry - tree form - 12 ft.		
7	Carnus - red grafted on white - flowering		
8	Quercus palustris - foliage - chlorotic		
12	Halesia monticola - tree form (in flower)		
13	Halesia - flowers & leaves		
15	Crabapples		
34	Prunus virginiana - tree in flower		

no number *Fagus sylvatica atropunicea?* - foliage colour - June

3 Ontario forest on Trans Canada highway north of Sault Ste. Marie

Dec. 1963

10 *Quercus palustris* - tree form & autumn colour

12 *Aesculus hippocastarium* - flower head - general

15 *Tilia americana* - stump sprouts - red

27 *Cercidiphyllum japonicum* - foliage

31 *Cercidiphyllum japonicum* - tree form - 35 ft. tall

Genetics - self-fertility testing - Horsholm, Denmark - *Fagus sylvatica*

Prunus sargentii

Box 3 - M. Mezgher, U of T

Left side

2 Forest Geog. - vegetation established near limits - invasion of disturbed ground -
 Pinus flexilis on lava, Idaho

2 Forest Regions - N. A. - Inter-mountain dry basin, Wyoming - temporary stream
 bed

6 Forest geog. - exposed coastal - cool & summer dry - *Picea sitchensis*

8 Forest Regions - N. A. - Montane - most sub-region - *Thuja plicata*, *pin. montic.*,
 Pseudots. menz., *Tsuga hetero* - Cascade Mountains, BC

11 Forest regeneration - N. A. - Montane - *Lx occid.*, *Pseudots. menz.*, *Pin. pond.* in
 mixed stand, Okanagan Valley, BC

- 12 Umbellaria californica - foliage
- 13 Larix occidentalis, Pinus ponderosa, Pseudotsuga menziesii - young. Montane forest - dry sub-region, East Kootenay, BC
- 15 Forest regions - montane - young Douglas fir, Pin. monticola, Pin. ponderosa Oregon
- 16 Forest regions - montane - Pseudo. menz., Pin. lambertiana, Southern Oregon
- 17 Forest regions - N. A. - montane - moist sub-region - Lx. occident. & Picea engelmannii on far bank, Pinus ponderosa on near
- 18 Forest regions - N. A. - montane - Picea engelmannii, Ab. lasiocarpa, Pinus contorta, Yellowstone Park
- 19 Forest regions - N. A. - montane - young pinus contorta & flowers - Yellowstone Park
- 20 Forest regions - N. A. - coastal BC
- 22 Picea sitchensis - tree form - mature - 180 ft.
- 22 Sequoia sempervirens vs - Sequoiadendron giganteum (R) - tree form
- 24 Forest regions - N. A. - plains - showing lack of trees near stream bank - South Dakota
- 25 Forest regions - N. A. - west coast - southern half. Vancouver Is. - Pseudo. menz., Tsuga heterophylla - Cowichan Lake
- 29 Forest regions - N. A. - west coast - mature Douglas fir, hemlock, Abies grandis

- 30 Pseudotsuga menziesii viridis - bark mature. Lk. Cowichan, Vancouver Is., BC
- 31 Forest regions - N. A. - montane - wet sub-region - Tsuga hetera, Abies grandis,
Thuja plicata, Pinus monticola, Pseud. menz. - Nelson BC
- 34 Forest regions - N. A. - montane - wet sub-region - Picea engelmannii, Abies grandis,
Pop. trichocarpa, Pseudo. menz., (Pinus ponderosa) - Salmo, BC
- 36 Forest regions - N. A. - montane - Lx. occidentalis, Pseudo. menz., Tsuga heterophylla,
Picea engelmannii, Abies grandis - W. Kootenay Valley, BC
- B4 Forest regions - N. A. - west - sub-alpine forest
- F53 Forest regions - N. A. - west - montane - Rocky Mountain trench - Invermere Valley
- H77 Western red cedar
- no number Forest regions - N. A. - coastal - wet - logging after blowdown
- Right Side
- 2 Forest geog. - "Pumice deserts" & cones - red cone in centre - Pin. contorta & Tsuga
mertensiana
- 3 Picea engelmannii & Abies lasiocarpa - summit of Selkirk Range, BC
- 7 Forest regions - N. A. - montane - dry portion - cultivated valley (Pop. trichocarpa natural)
& dry mountain slopes
- 7 Forest regions - N. A. - Inter-mountain dry basin, Wyoming - lack of trees along stream
- 8 Forest regions - N. A. - Inter-mountain dry basin, Wyoming - absence of trees along stream
- 8 Forest regions - N. A. - boreal - in Saskatchewan - north of Prince Albert

- 9 Chamaecyparis lawsoniana - young tree in stand - Oregon coastal highway
- 11 Genetics - varieties - Pseudotsuga menziesii - slow-growing, short-leaved coastal variety
- 12 Forest regions - N. A. - boreal - aerial view - Saskatchewan - north of Prince Albert
- 12 Forest regions - N. A. - Rocky Mountains - sub-alpine forest - Pc. engelmannii & Abies lasiocarpa near Cranbrook, BC
- 18 forest regions - N. A. - montane - Pinus ponderosa, contorta, Populus trichocarpa (Too low for western larch and Douglas fir) - Kettle River, BC
- 29 Abies procera - tree form - mature, showing cones
- 33 Pinus monticola - tree form - young - w Pinus contorta, Pseudo. menz., Picea engelm., Betula papy, Pop. trem., Salmo, BC
- 35 Forest regions - N. A. - montane - forest zones from valley to mountain top, - Wyoming, - grassland, aspen, pine - fir, spruce - larch, spruce - balsam, barren
- 37 Forest geog. - lava flow - eastern Idaho
- B13 Crater Mt. - abandoned - preemption range
- F58 Cranbrook Valley
- H75 Hemlock - Jordan R.
- H81 Sitka spruce - Jordan R.

H93	Near L. Cowichan		
H95	Near Mesatchie L.		
95	Dwarf mistletoe - Quercus garryana, Oregon	1955	
No number	Picea sitchensis - golden variety		
No number	Genetics - colour variation in Douglas fir - Pseudotsuga menziesii. Coastal zone, Vancouver Is., Alberni Highway near McMillan Park		
No number	Genetics - stunted form of Pinus sylvestris in central Sweden		
Box 4			
Left side			
1	Norway Pt. - red pine stand cut spruce, white pine	July 19/54	28
1			
4	Decollert? jack pine - mature - birch & spruce, understory of spruce & fir	July 14/54	29
6	Red pine stand on white spruce - white pine type - note ? pine - brush cover	July 19/54	33
8			
10	Black spruce - sphergrnum type	July 16/54	35
11			
13	White pine & black spruce - reproduction index - 70 year old cover type - on White pine white spruce type - McNiece Pond	July 23/54	52

16	70 year poplar black spruce cover on black spruce cedar fir type - over ? pine - area #5, Mgt. #56	July 24/54	
19	90 year red pine cover on white pine black spruce type - outcrop in Mosane Centre - white spruce white pine	July 17/54	40
20	? industry in stable Pw - black spruce (bordering cedar clay) - west side Norway Pt.	July 28/54	61

Right side

5	Fringe - Irving Island at Nawakou Falls		
6	Uncut white pine - North side of Nawakou R.		
7	White pine along hill tops - black spruce & jack pine lower	July 23/54	
11	Ground cover - 70 year old jack pine, white & black spruce on white pine white spruce type - McNiece Pond	July 23/54	52

15 - 17, 20

20 - 22

22

Box 5 - Martin Fung

Box 6 - Bark trees - M. Meagher

Left side

6	Carya (pecan illinoensis) orchards
8	Quercus cacinea? velutina? - bark - 12 in., 60 ft.
14	Betula nigra - bark - young mature

- 15 Pinus elliotii - bark - 17 in.
- 16 Platanus occidentalis - bark - young
- 16 Oxydentrum arboreum - tree - 12 in.dbh. 35 ft.
- 17 Betula nigra - tree group
- 18 Carya tomentosa - tree form
- 27 Liriodendron tulipifera - crowns show fruit heads
- 31 Liquidambar styraciflua - view up tree showing fruit heads - Georgia
- 31 Taxodium distichum - crown - winter
- 32 Cercis canadensis & magnolia grandiflorum
- 32 Taxodium distichum - bole
- 34 Magnolia grandiflorum - foliage
- 34 Taxodium distichum - crown - winter
- 36 Liquidambar - bark - mature
- 37 Liquidambar - crowns - mature
- 38 Pinus echinata - bark - young mature
- Right side
- 2 Fx amer. - bark, showing variation - Backus woodlot, St. Williams - 1/100 5.6

- 4 *Betula nigra* - bark 14-16 in.
- 4 *q. prinus* - bark mature
- 5 *Ulmus glata* - bark
- 7 *Liriodentron tulipifera* - bark - 15in. - trees - 64 years
- 7 *Carya pecan* - tree
- 8 *Carya pecan* - limbs
- 13 *Castanea dentata* - chestnut blight damage
- 16 *Oxydendrum arboreum* - bark mature
- 17 *Oxydendrum arboreum* - view up tree
- 19 *Carya tomentosa* - bark mature
- 22 *Oxydendrum arboreum* - bark mature & poison ivy
- 22 *Pinus pungens* - mature trees in forest - Appalachians in Virginia
- 37 *Quercus coccinea* - tree form - like *Q. rubra*, but persis branches along bole

Box 7 - 1979 cutting

- 2
- 3 4-5 months
- 4

5	Plm cuttings at 14 months - RAI 55cm ²	
7	Plm at 14 months - RAI 78cm ²	
14	PNb at 7 months	5/10/76
15	Plm at 6 months	5/10/76
18	Cutting setup	
18	Orono, Feb. 1979 - plastic house for Plm vegetable propagation	
19	Orono, Dec. 7/79 - Martin Fung - approximately 20 days after germination	
19	PNb at 7 months	5/10/76
20	Orono, Feb. 7/79 - Martin Fung & Plm 14 days after germination	
20	Dr. Zsuffa's PNb - 3 ½ years old	
21	Orono, Feb/79 - 1 year x PO aspen from seed	
21	Plm cuttings at 14 months - RAI 78cm ²	
22		
22	Orono, Feb. 7/79 - 1 yr x PO aspen & Bill Benting	
23	Orono, Feb. 7/79 - Bill Benting & 1 yr x PO aspen	

Box 8

- 2 Shorelines of rP Class I (age) and rP Class II (immature)
- 2 Pine stand around north Angus Lake Cabin
- 3 Fringe: Hilly Island Lac La Croix
- 4 Canadian Pt. - rP regeneration at position of log-dump;
- 9 Untouched stand - north side Namakou R.
- 13 Fringe: Irving Island - partly burned
- 23 Line #40 - s. slope into low-lying Po
- 24 Line #40 - NE slope: Po, wB, mtn Maple
- 27 White pine forest in low-lying area - Basswood Island

July 18/54

Box 9

- 2 *Carya tomentosa* - tree form - dbh 18 in. ht. 75 ft.
- 6 *Koelryteria paniculata* - flowers - close
- 13 *Nyssa sylvatica* - bark mature
- 20 Landscaping - prunus variation - street in Vancouver
- 22 Pj - PI hybrids from Alberta - intermediate hybrid
- 23 *Pinus banksiana* - tree form - young

24	<i>Fagus sylvatica atropunicea</i> - Victoria, BC
25	Sugar maple - Owen Sound
25	<i>Salix circulifolia?</i> <i>tortuosa?</i>
26	Sugar maple - Owen Sound
27	Sugar maple - dead - Owen Sound
32	<i>Acer negundo?</i> - Owen Sound
32	Red cherry - landscaping -Sault Ste Marie
33	<i>Ulmus parvifolia</i> - bark - 8 in. dbh
34	<i>Zelkova serrata?</i> - bark - dbh 16 in.
35	<i>Fagus grandifolia</i> - chlorotic in early August
35	<i>Zelkova serrata?</i> - tree form - 50ft tall - Rochester
36	Red oak - chlorotic
37	Red oak - chlorotic - leaves
no number	Pollen - heavy crop in Cedar Lake, Brent, Algonquin Park

May 1964

Box 10

Left Side

1Lb Shear blade - Hearst

1M Spring

6R	Mid summer	
6U	Mid summer	
31	Thunder Bay - C & H plough	
32	Thunder Bay - C & H plow	
33	Thunder Bay - C & H plow	
34	Thunder Bay - C & H plow	
Right Side - Before and After shots - incomplete		
1C	Niblock - before	4
1D	Wold River Road - before	4
7V	Wolf River Road - after	1
8A	Wolf River Road - after	9
Box 11 - Temagami stand structure		
Left Side		
13 - 22	Temagami stand structure	
No number	4 slides	
Right Side		
no number	5 slides	
10 - 12	Temagami stand structure	
13	Tem Isl	2

18	Tem Isl - PNs wind throw	2
20	Tem Isl - PNs 150 - 260 years	2
22	Tem Isl - Note PNs chicot? - alive after fire	2
26	Tem Isl	

Box 12 - Southern Trees

Left Side

2	Betula lenta - bark - 10 in dbh
3	Betula nigra - trees - nr. rvr. - and Platanus occi.
3	Q. prinus (Montana) - tree form - mature
9	Halesia carolina - bark - 2-3 in.
10	Pinus rigida near Brockville, Ontario
11	Magnolia fraseri - clump from coppice
11	Liquidambar styraciflua - crown of young
12	Castanea dentata - sprouts showing blight damage
12	Pinus rigida near Brockville, Ontario
14	Tsuga caroliniana - small tree
15	Tsuga carliniana - foliage

- 15 *Nyssa sylvatica* - bole and *Quercus prinus*
- 18 *Tsuga canadensis* - mature tree, North Carolina
- 20 *Pinus pungens* - tree form - young
- 21 *Platanus occidentalis* - tree form - mature + hemlock & *Aesculus glabra*
- 21 *Pinus pungens* - foliage and cones
- 26 *Celtis occidentalis* - view up tree (dbh 24 in.) - Georgia
- 31 *Aesculus glabra* - tree - mature
- 33 *Cornus florida* - bark 7 in. dbh
- Right Side
- 1 *Liquidambar styraciflua* - young trees - 8 ft. high
- 7 *Quercus phellos?* or *nigra?* - Georgia
- 8 *Quercus phellos?* or *nigra?* - stream bank - Georgia
- 10 *Betula lenta* - from seed - 17 years - 8in., 45 ft.
- 10 *Liquidambar styraciflua* - young tree + *Betula nigra* & *Acer negundo* - Georgia
- 12 *Liquidambar styraciflua* - crown of young tree
- 23 *Betula lenta* - bark
- 24 *Betula lenta* - trees along road - North Carolina

- 25 *Celtis occidentalis* - bark - 24 in. - flood line - 5 ½ ft. - Georgia
- 27 *Liquidambar styraciflua* & “white” *Platanus occi.*
- 28 *Quercus pagodaefolia* - large tree in flower - Georgia
- 29 *Liquidambar styraciflua* - crown of large tree - Georgia
- 29 *Magnolia acuminata* - crown - North Carolina - mountains
- 30 *Liquidambar styraciflua* - bark - 16 in.
- 32 *Aesculus glabra* - bark - mature - 30 in dbh
- 33 *Cercis canadensis* - flowers - general
- 35 *Quercus coccinea* - bark & bole - 16 in. dbh
- 36 *Quercus coccinea* - view up tree showing persis branches

Box 13 - Composite photos of tree spp

Left Side

- D4 Norway spruce, hemlock, white spruce
- D5 White cedar
- D7 Hickory
- D8 Walnut & butternut
- D25 Ash

11 Ac. platanoides

19 Ac. rubrum

Right Side
D1

White pine

D19 Black locust, honey locust

D21 Sugar maple

D22 Red maple, Manitoba maple, Silver maple

12 Ac. platanoides

Box 14

3 JDI - Pat Mareeau

7 Nipigon, Beardmore - The "Party"

14 Ian Poulin, Bob Bouehe, Bill Foster, John Burton

Oct. 1979

25 Pillow stock - EMV - Ed Markus

33 St. Regis ?

Box 15

Left Side

D3, D9, D11, D16, D18, D20, D23, D27, D29 - D31

E8, F86

Right Side

D2

D6 Native willow & poplars

D10 Chestnut, Blue beach, hornbeam

D13

D14 Red, white & rock elm

D15, D17

D24 Bass

D26

D26 Bur oak, white oak

D28, D32

Box 16

Left Side

7, 9, 11, 14, 18, 24 - 26, 28 - 32

25 Needles - primary & secondary

Right Side

8, 10, 12

14 Complete nutrients

23, 23 -24, 26, 29 - 30 - Entire plant

30 Greenhouse setup - White pine - deficiency series

32