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FIGURES

Figure 1.

Aerial photograph of the cleared area and surrounding forest.

Figure 2.

Site I. Habitat showing regrowth.

Site II. Habitat showing cover and older trees.

Site III. Habitat showing open landscape.

Site IV. Habitat showing area behind lower pond.

Figure 3.

Schematic (not to scale) of the excavation showing the quarry and the four transect locations which are marked in black.

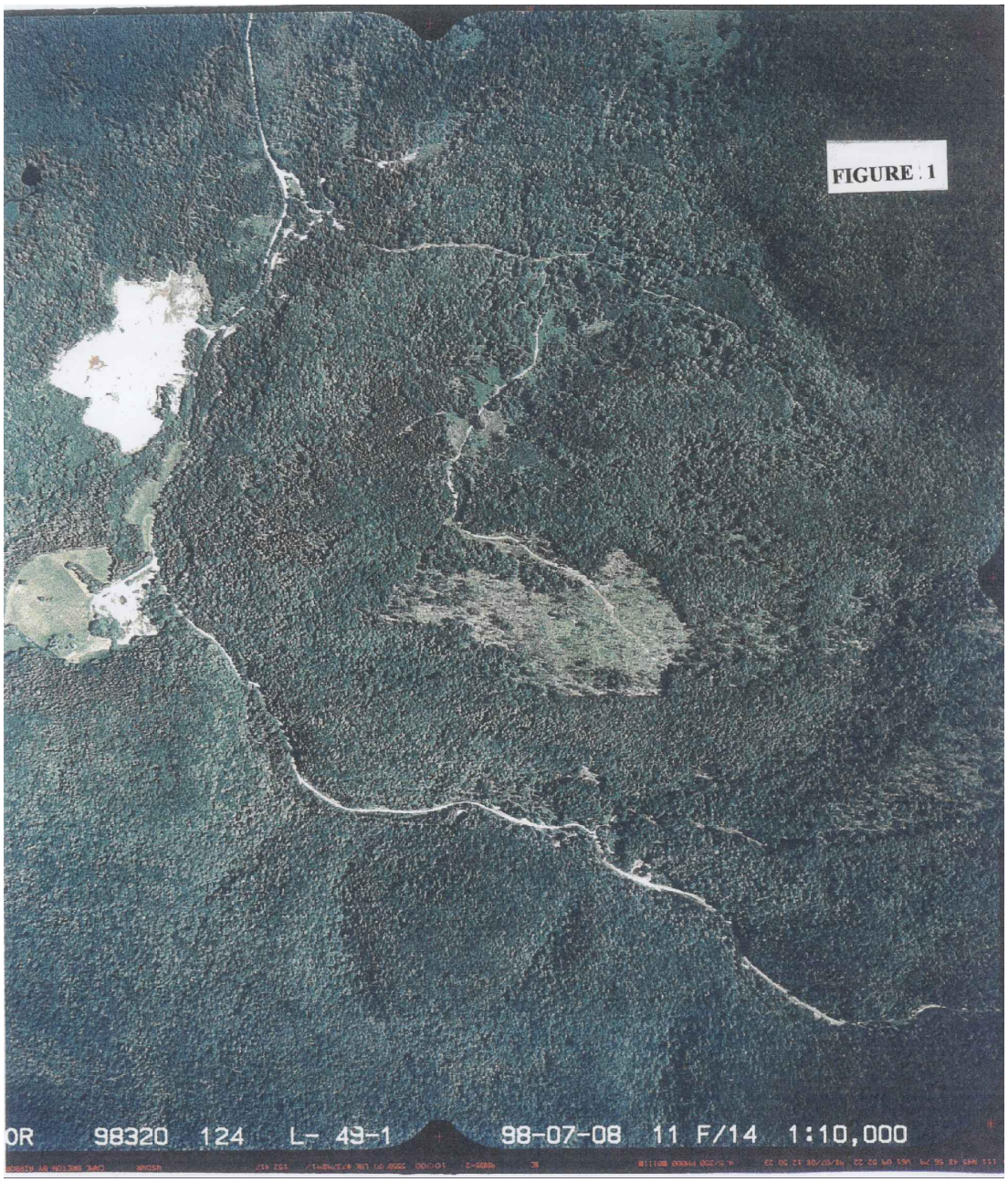


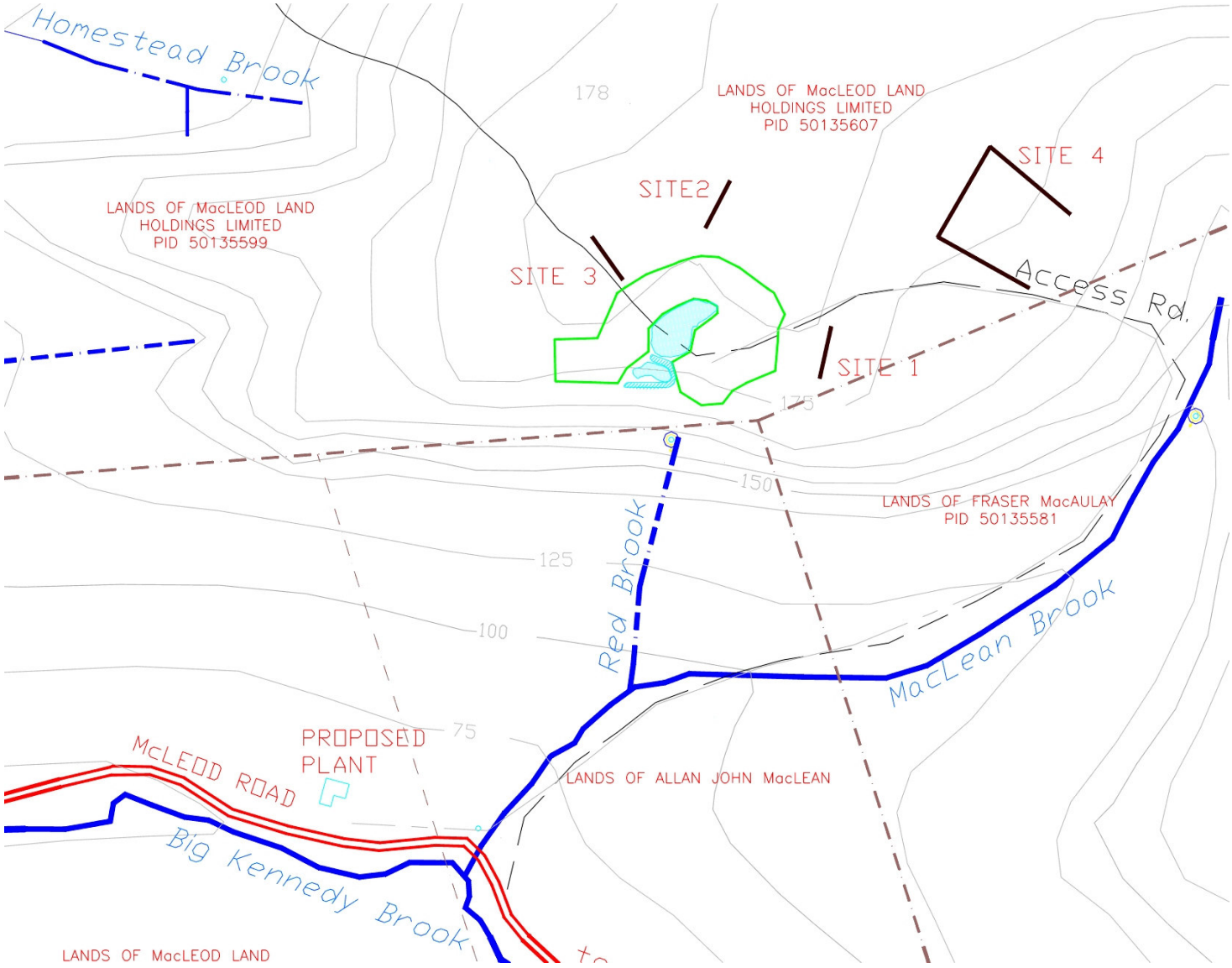
FIGURE 1
OR 98320 124 L- 43-1 98-07-08 11 F/14 1:10,000

Site I.

Site II.

Site III.

Figure 3: Transect Locations



Resumes of Clifford and Alina Stahevitch-Crompton

Clifford W. Crompton

Diploma in Agriculture Kemptville Agricultural School now Kemptville Institute of Agricultural Technology affiliated with University of Guelph. 1959-1960

Master of Science, Macdonald College of McGill University 1982.
Specializing in Plant Taxonomy and Palynology.

Employed by Agriculture and Agri-Food Canada 1959 to 1995.

Held many positions including, Senior Technician, Vascular Plant Taxonomy; Senior Biologist in Plant Taxonomy and finally as Curator- Manager of the national program in Plant Gene Resources of Canada (PGRC).

Author or co-author of 47 research publications. Author of two books and one major technical publication. Editor of International Symposium on Aerobiology, and acted for several years as an Associate Editor for the international journal. "Aerobiologia" Was an associate editor of "Index of Plant Chromosomes" for the International Association of Plant Taxonomy

Conducted field surveys on vascular plants throughout Canada, the United States and Mexico for many years.

A partner in the Aerobiology Research Laboratory, Ottawa, ON

I am currently on a five year appointment as Curator of the Herbarium, University College of Cape Breton.

Alina E. Stahevitch-Crompton

B.Sc, McGill University, Honours Ecology (1972)

M.Sc., Macdonald College of McGill University, Plant Taxonomy (1976)

Research Associate, Maharashtra Association for the Cultivation of Science, Pune, India (1976-1977)

Ph.D., Macdonald College of McGill University, Cytogenetics and Plant Systematics (1981)

Research Scientist, Agriculture Canada (1982-1989)

Chief, Plant Health Risk Assessment Unit, Agriculture and Agri-Food Canada (1989-1998)

Member, Pest Risk Assessment Committee, North American Plant Protection Organization (1990-1997)

Member, Food and Agricultural Organization of the United Nations-World Trade Organization Committee on Pest Risk Assessment (1995-96).

Research Associate in Plant Taxonomy, University College of Cape Breton.

Co-authored a book and authored or co-authored 12 scientific papers.

Have conducted fieldwork throughout North America and South Asia.

TABLE I: SPECIES COMPOSITION DATA FOR SITE I

GROUP	SCIENTIFIC NAME[1]	COMMON NAME[2]	No. PLANTS	COMMENT
FERNS	*Dryopteris filix-mas* (L.) Schott	Male Fern	3	
CONIFERS	*Abies balsamea* (L.) Mill.	Balsam-fir	1	
	*Picea glauca (*Moench) Voss	White Spruce Cat Spruce	2	
DICOTYLEDONS	*Acer saccharum* Marsh.	Sugar Maple	80	20 in canopy 60 in understory
	Actea rubra (Ait.) Willd.	Red Baneberry	3	
	Alnus incana (L.) Moench	Speckled Alder	3	
	Aster lanceolatus Willd.	--	5	
	Fagus grandfolia Ehrh.	American Beech	6	understory

[1] Zinck (1998)

[2] Zinck (1998) or -- if no common name in Zinck

TABLE I: SPECIES COMPOSITION DATA FOR SITE I				
	Veronica officinalis L.	Common Speedwell	3	

TABLE II: SPECIES COMPOSITION DATA FOR SITE II				
GROUP	**SCIENTIFIC NAME [1]**	**COMMON NAME [2]**	**No. PLANTS**	**COMMENTS**
FERNS	*Botrychium virginianum* (L.)Sw.	Rattlesnake Fern	2	
	Matteuccia struthiopteris (L.) Todaro	Ostrich Fern Fiddlehead Fern	25	
	Onoclea sensibilis L.	Sensitive Fern	20	
	Osmunda claytoniana L.	Interrupted Fern	2	

[1] Zinck (1998)

[2] Zinck (1998) or -- if no common name in Zinck

TABLE II Cont'd....

TABLE II: SPECIES COMPOSITION DATA FOR SITE II				
	Polystichum acrostichoides (Michx.) Schott.	Christmas Fern Holly Fern	3	
CONIFERS	*Abies basamea* (L.) Mill.	Balsam-fir	3	
	Picea glauca (Moench) Voss	White Spruce Cat Spruce	2	

TABLE II Cont'd....				
GROUP	**SCIENTIFIC NAME[1]**	**COMMON NAME[2]**	**No. PLANTS**	**COMMENTS**
MONOCOTYLEDONS	*Agrostis perennans* (Walt.) *Tuckerm.*	Perennial Bent-grass	10	
	Corallorhiza maculata Raf.	Spotted Coral-root	2	
	Poa pratensis L.	Kentucky Bluegrass	10	
	Polygonatum pubescens (Willd.) Pursh	Solomon's Seal	6	

[1] Zinck (1998)

[2] Zinck (1998) or -- if no common name in Zinck

TABLE II Cont'd.....

TABLE II Cont'd....

DICOTYLEDONS	*Acer pensylvanicum* L.	Moose Maple Striped Maple	30	
	Aster spp.		10	
	Betula alleghaniensis Britt.	Yellow Birch	5	in canopy layer
	Cerastium arvense L.	Field Chickweed	1	
	Cirsium vulgare (Savi) Tenore	Bull Thistle	26	
	Epilobium angustifolium L.	Fireweed Large Willow- herb	12	

TABLE II: Cont'd....

GROUP	SCIENTIFIC NAME[1]	COMMON NAME[2]	No. PLANTS	COMMENTS
	Epilobium ciliatum Raf	Willow-herb	2	

[1]Zinck (1998)

DICOTYLEDONS Cont'd....

[2]Zinck (1998) or if none give,

TABLE II: Cont'd....

	Galium palustre L.	Common Bedstraw Marsh Bedstraw	3	
	Hieracium lachenalii C. Gmelin.	--	30	a hawkweed
	Pyrola minor L.	Small Wintergreen	10	
	Sambucus racemosa L.	Red-berried Elder	3	
	Senecio jacobaea L.	Tansy Ragwort Stinking Willie	2	
	Solidago canadensis L.	Canada Goldenrod	10	
	Solidago graminifolium (Auctorum)	Grass-leaved Goldenrod	16	
	Solidago rugosa Ait.	Rough Goldenrod	12	
	Trientalis borealis Raf.	Starflower	3	

TABLE III: SPECIES COMPOSITION DATA FOR SITE III

GROUP	SCIENTIFIC NAME[1]	COMMON NAME[2]	No. Plants	COMMENTS

[1] Zinck (1998)

TABLE III: SPECIES COMPOSITION DATA FOR SITE III

GROUP	SCIENTIFIC NAME[1]	COMMON NAME[2]	No. Plants	COMMENTS
CONIFERS	*Picea glauca* (Moench) Voss	White Spruce Cat Spruce	1	
	Pinus strobus L.	White Pine	1	
MONOCOTYLEDONS	*Agrostis perennans* (Walt.)Tuckm.	Perennial Bent-grass	18	
	Carex brunnecens (Pers.) Poiret	--	20	a sedge
	Scirpus atrovirens Willd.	--	10	a bulrush
Dicotyledons	*Acer saccharum* Marsh	Sugar Maple		abundant
	Anaphalis margariacea (L.) Benth. & Hook.	Pearly Everlasting	10	
	Barbarea vulgaris L.	Yellow Rocket Winter-cress	2	
	Chysanthemum (Leucanthemum) vulgare L.	Ox-eye Daisy	30	

[2] Zinck (1998) or – if no common name in Zinck

TABLE III Cont'd....

[1] Zinck (1998)

[2] Zinck (1998) or – if common name not in Zinck

TABLE III Cont'd....

TABLE III: SPECIES COMPOSITION DATA FOR SITE III

DICOTYLEDONS Cont'd....	*Cirsium arvense* (L.) Scop.	Canada Thistle	25	
	Cirsium vulgare (Savi) Tenore	Bull Thistle	25	
	Cerastium arvense L.	Field Chickweed	30	
	Cornus alternifolia L.f.	Alternate-leaved Dogwood	30	
	Geranium robertianum L.	Herb-Robert	7	
	Hieracium floribundum Wimm. & Grab.	King Devil Yellow Hawkweed	30	
	Hieracium caespitosum Durmort	--	50	a hawkweed
	Impatiens capensis Meerb.	Spotted Touch-me-not Jewelweed	20	
	Prunella vulgaris L.	Heal-all	100	scattered, but common
	Rubus idaeus L.	Red Raspberry	30	
	Rumex crispus L.	Curled Dock	5	

TABLE III Cont'd....

GROUP	SCIENTIFIC NAME[1]	COMMON NAME[2]	No PLANTS	COMMENTS
DICOTYLEDONS Cont'd...	*Sambucus spp.*	Elderberry	2	
	Solidago canadensis L.	Canada Goldenrod	17	
	Tussilago farfara L.	Coltsfoot	40	
	Vicia cracca L.	Tufted Vetch	20	

TABLE IV: SPECIES COMPOSITION DATA FOR SITE IV

SUBSITE A

GROUP	SCIENTIFIC NAME[1]	COMMON NAME[2]	No. PLANTS	COMMENTS
FERNS	*Dryopteris marginalis* (L.) Gray	Marginal Wood Fern	10	

[1] Zinck (1998)

[2] Zinck (1998) or – if no common name in Zinck

[1] Zinck (1998) [3] Abundant on site [4] Uncommon on site

[2] Zinck (1998) or -- if common name not in Zinck

TABLE IV Cont'd....

TABLE IV: SPECIES COMPOSITION DATA FOR SITE IV

	Polystichium spp.	--	8	Christmas ferns; none are rare
CONIFERS	*Abies balsamea* (L.) Mill.	Balsam fir	1	
..**DICOTYLEDONS**	*Acer pensylvanicum* L.	Moose Maple Striped Maple	5	
	Acer saccharum Marsh.	Sugar Maple	A[3]	80% canopy 20% understory
	Acer spicatum Lam.	Mountain Maple	U[4]	a few plants on site
	Pyrola minor L.	Small Wintergreen	U	occasional clumps, each of a few plants
	Trientalis borealis Raf.	Starflower	U	a few plants
SUBSITE B				
GROUP	**SCIENTIFIC NAME[1]**	**COMMON NAME[2]**	**No PLANTS**	**COMMENTS**
FERNS	*Dryopteris marginalis* (L.) Gray	Marginal Wood Fern	18	
DICOTLYLEDONS	*Acer pensylvanicum* L.	Moose Maple Striped Maple	A	common in understory
	Acer saccharum Marsh.	Sugar Maple	A	100% canopy; abundant in understory
	Acer spicatum Lam.	Mountain Maple	U	several plants on subsite
	Aralia nudicaulis L.	Wild Sarsaparilla	30	
	Aster spp.			Asters; none rare

TABLE IV: SPECIES COMPOSITION DATA FOR SITE IV

	Fagus grandfolia Erhr.	American Beech	10	occasional as understory tree
	SUBSITE C			
DICOTYLEDONS	*Acer saccharum Marsh.*	Sugar Maple		80% canopy 20% understory
	Anaphalis margaritacea (L.) Benth. & Hook.	Pearly Everlasting		forming clumps in unshaded spots
	Aralia nudicaulis L.	Wild Sarsaparilla		patches each of several plants
	Fagus grandfolia Ehrh.	American Beech		several plants
	Rubus idaeus L.	Red Raspberry		in unshaded spots
	Solidago rugosa Mill.	Rough Goldenrod		in unshaded spots

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[1] Zinck (1998) [2] Zinck (1998) or – if no common name in Zinck

TABLE V: SPECIES OF CONCERN TO REGULATORS[i]

SPECIES[ii]	COMMON NAME[2]	GROUP	COMMENTS
Asclepias incarnata L.	Swamp Milkweed	Dicotyledons	Wet or rocky thickets. This species is cultivated as an ornamental.
Botrychium lunaria (L.) Sw.	Moonwort	Ferns	Very rare. Gravelly slopes, shores and meadows.
Cardamine pratensis L.	Cuckoo Flower	Dicotyledons	Introduced species, likely a garden escape; used as potherb (Bailey 1997). Roadsides in Cape Breton.
			A sedge. Sphagnum

TABLE V: SPECIES OF CONCERN TO REGULATORS[i]

SPECIES[ii]	COMMON NAME[2]	GROUP	COMMENTS
Carex viridula Michx.	--	Monocotyledons	swales, rocky seashores, borders of brackish ponds.
Clethra alnifolia L.	Sweet Pepperbush White Alder	Dicotyledons	Introduced cultivated species. Lake shores, swamps, damp thickets. Has been found in Digby, Yarmouth, and Halifax Co.
Coreopsis rosea Nutt.	Pink Coreopsis	Dicotyledons	Sandy and cobble beaches and wet shores, margins of lakes; prefers wavy shorelines.
Drosera filiformis Raf.	Three-leaved Sundew	Dicotyledons	Peat bogs in Shelburne Co.. NS to La. In Canada considered endangered by COSEWIC.[3]
Dryopteris filix-mas (L.) Schott	Male Fern	Ferns	In dry upland woods, on limestone and slate. Widespread in North America (Newfoundland, Cape Breton, New Brunswick to southern California. Occasional in Nova Scotia. Also from Greenland to Eurasia.
Euthamia (Solidago)			Common in Yarmouth Co. On

[3] COSEWIC = Keddy, C. (unpublished)

TABLE V: SPECIES OF CONCERN TO REGULATORS[i]

SPECIES[ii]	COMMON NAME[2]	GROUP	COMMENTS
galetorum Greene	--	Dicotyledons	lake shores, sandy beaches, or in damp, peaty soils.
Floerka proserpinacoides Willd.	False Mermaidweed	Dicotyledons	Aquatic or semi-aquatic, deciduous ravines, waterfalls, and slow-moving streams. North central Cape Breton, Antigonish and King's Co., and Truro area.
Geum peckii Pursh	Eastern Mountain Avens	Dicotyledons	Digby area only. In Canada occurs in bogs and on sphagnum hummocks. Endangered status in Canada (COSEWIC)[3].
Goodyera repens (L.) R. Br.	Creeping Rattlesnake Plantain.	Monocotyledons	Local, but plentiful where found. Under conifers, in Shelbourne, Queens, and Guysborough Co.
Hydrocotyle umbellata L.	Water-pennywort	Dicotyledons	Wet sandy or gravelly lake margins, Yarmouth and Queens Co. Endangered (COSEWIC)[3]
Juncus alpinoarticulatus	Richardson's Rush	Monocotyledons	Wet shores and marshes, usually

[3] COSEWIC = Keddy, C. (unpublished)

TABLE V: SPECIES OF CONCERN TO REGULATORS[i]

SPECIES[ii]	COMMON NAME[2]	GROUP	COMMENTS
Chaix.			calcareous.
Juncus caesariensis Cornille	New Jersey Rush	Monocotyledons	Bogs and fens in SE Cape Breton to coastal plain.
Lilaeopsis chinensis (L.) Kuntze	--	Dicotyledons	Muddy tidal bands and estuaries in Yarmouth, Lunenburg, and Queen's Co.
Lilium canadense L.	Yellow lily	Monocotyledons	Meadows and streambanks.
Lophiola aurea Ker-Gawlor	Golden-crest	Monocotyledons	Lake shores, savannas, and sphagnum swales.
Lycopodium (Diphasiastrum) complanatum (L.) Holub	--	Club-mosses	No club-mosses were found at the site.
Rumex salicifolius Weinm. var *mexicanus.*		Dicotyledons	Cobiquids-Annapolis Valley to Cape Breton. Syn: of *R. triangulivalvis* (Danser) Rech. f. a wide-ranging species.
Sabatia kennedyana Fern.	Plymouth gentian	Dicotyledons	Coastal plains species which is known in NS only from Yarmouth Co. Peaty margins of lakes, rivers, and bogs.

[1]. Zinck 1998 if no common name in Zinck indicated by --