APPENDIX A:
HABITATS AND BEHAVIORAL PATTERNS OF SOME AQUATIC SPECIES OF PRINCE EDWARD ISLAND

FINFISH / SHELLFISH

FAMILY	GENUS SPECIES	HABITAT	MIGRATORY BEHAVIOR	MIGRATORY PERIOD	SPAWNING PERIOD	IMMOBILE PERIOD	SPAWNING TEMP (ºC)	SEXUAL MATURITY
Clupidae (Herrings)	*Alosa aestivalls* blueback herring gaspereau	usually spawn in fast flowing water just above the head of tide	anadromous	June to mid July	mid June to mid July	late June to late July	20-22	3-4 years
	Alosa pseudoharengus alewife; gaspereau	usually spawns in lakes, estuaries and slow moving water just above the head of tide	anadromous	April to mid July	late April to June	late April to mid June	14-21	3-4 years
Salmonidae (Trout and Salmon)	*Oncorhynchus mykiss* (Walbaum) rainbow trout	open water; fast moving; spawn in gravel riffle above a pool (the coarser the gravel, the better the survival rate)	anadromous / freshwater	March to late June	mid April to late May	mid April to late June	10-10.5	3-4 years
	Salmo salar Atlantic salmon	large, cool rivers and small brooks with a gravelly bottom ; may ascend smaller streams immediately prior to spawning, especially during high water; spawn in gravel riffle and pool tail outs	anadromous	May to early August; Sept. to mid November	mid October to mid November	October to mid June	7.5-10.5	3-4 years
	Salvelinus fontinalis brook trout; speckled trout	inhabit cool, clear streams and lakes; spawn in gravelly or rocky bottoms, slow-flowing or spring fed water with tree lined banks	anadromous / freshwater	September to mid November; anadromous populations generally migrate upstream from Tide Water mid May to end of June	mid September to mid November	late September to mid June		2 - 3 years
Asmeridae (Smelts)	*Osmerus mordax* (Mitchill) rainbow smelt	spawn in gravel bottomed brooks and streams	anadromous / landlocked	March to early June	late April to early June	late April to early July	8.9 - 18.3	2 - 3 years

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Gasterosteidae (Sticklebacks)	*Gasterosteus aculeatus* threespine stickleback	lives in shallow waters; constructs nest of small twigs and plan debris in shallow water.	anadromous / freshwater	late April to mid Jul	early June to late July	June to late July	19	<1 years
	Apeltes quadracis (Mitchell) fourspine stickleback	live in vegetated areas (esp. eel grass); male constructs small nest in shallow water for spawning	freshwater / marine	late April to mid Jul	May to mid July	May to late June	18	<1 years
Gasterosteidae (Sticklebacks)	*Pungitius pungtius* (Linnaeus) ninespine stickleback	lives in shallow water; spawns in freshwater; male buils nest in a site among the weeds	freshwater / marine	late April to mid Jul	June to late July	June to late July	18	<1 years
Percichthyidae (Temperate Basses)	*Morone americana* (Gmelin) white perch	shallow water in lakes and rivers; can tolerate low salinity and high temperatures, but prefers cool brackish water; any bottom type	Anadromous / and land locked	late April to early Ju	May to early June	May to mid June	11 - 15	2 - 3 years
	Morone saxatilis (Wallaum) striped bass	marine and estuaries, spawn in tidal current	anadromous	May to early June (spawning migration)	early June	June	15 - 19	4 - 6 years
Antherimidae (Silversides)	*Menidia menidia* (*Li* nnaeus) silverside	brackish-water marshes, interidal c	estuarine	April to May	early June	June	15 - 20	1 - 2 years
Pleuronectidae (Righteye Flounder)	*Liopsetta putnami* (Gill)	estuaries, mud or silt bottom	estuarine		late winter to early spring			
	Pseudopleuronectes americanus (Walbaum) winter flounder	inshore, shallow water, soft muddy to moderately hard bottoms	freshwater / marine	move offshore in summer, move onshore in winter	late winter to early spring			
Cyprinidae (Minnows)	*Chrosomus eos* (Cope) northerm redbelly dace	prefers quiet water of beaver pond, bog ponds, samll lakes or quiet pool like expansions of streams	freshwater	late May to August	late May to August	June		

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FAMILY	GENUS SPECIES	HABITAT	MIGRATORY BEHAVIOR	MIGRATORY PERIOD	SPAWNING PERIOD	IMMOBILE PERIOD	SPAWNING TEMP (ºC)	SEXUAL MATURITY
Cyprinodontidae (Gudgeons)	*Fundulus Diaphanus* (Lesueur) banded killifish	prefers the quiet waters of lakes and ponds; over sand, gravel or detritus covered bottoms	freshwater		late May		21 -23	
	Fundulus heteroclitus (Linnaeus)mummichog	most common in salt marsh flats, estuaries and tidal areas	estuarine	June to August	June to August	late June to August		
Gadidae (Cods)	*Microgadus tomcod* (Wallbaum) Atlantic cod	sandy gravelly bottom at the head of tide	anadromous	November to end of March	November to end of March	November to mid June	0 -3.9	2 - 3 years
Auguilidae (Freshwater Eels)	*Anguilla rostrata* (Lesueur) American eel	muddy, silty bottoms of lakes, rivers and ponds	catadromous	May & June; September to mid October	February to end of July			8 years
Mytoxodae (Mussels)	*Mytillus edulls* blue mussel	lives in colonies attached to sand, gravel, pilings, wharves etc., by strong byssal threads			June to end of August		15 - 20	<1 year
Ostreidae (Oysters)	*Crassostrea virginica* (Gmelin) Eastern oyster	attached to a hard rock or semi hard mud bottom			late June to end of July		20	4 - 5 years
Myidae (Soft Shelled Clams)	*Mya arenaria* soft shelled clam	burrows in sand, mud or gravel			June to end of August		25 - 28	1 - 2 years
Veneridae (Hard Clams)	*Mercenaria mercenaria* Northern quahog	burrows in sand or sandy clay			June to mid August		20 -25	1 - 2 years

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BIRDS

FAMILY	GENUS SPECIES	HABITAT	MIGRATORY PERIOD	BREEDING PERIOD	INCUBATION PERIOD	FLEDGING PERIOD	SEXUAL MATURITY
Anatidae (Swans, Geese, Ducks)	*Branta canadensis* Canada goose	ponds, lakes, bays, estuaries	Spring: March to late April; Fall: September to October	late April	28 days	August	2 years

FAMILY	GENUS SPECIES	HABITAT	MIGRATORY PERIOD	BREEDING PERIOD	INCUBATION PERIOD	FLEDGING PERIOD	SEXUAL MATURITY
Anatidae (Swans, Geese, Ducks)	*Anas rubripes* black duck	shallow ponds, lakes, marshes; sheltered saltwater (winter)	Spring	early April to mid June	28 days	August	1 year
	Anas platyrhynchos mallard	shallow ponds, marshes; sheltered saltwater (winter)	Spring: late march to early April, Fall:	early April to mid June	28 days	August	1 year
	Alx sponsa wood duck	forest edged lakes, ponds, swamps and marshes	Spring: April; Fall: late September to early October	May	28-30 days hatching in June	mid August	1 year
Ardeidae (Herons Bitterns)	*Botaurus lentiginoeurs* American bittern	marshes, bogs, swamps; salt marshes	Spring: mid May	June	24 days	August	
Charadriidae (Piping Plover)	*Charadrius melodus*	gravelly and sandy coastal beaches, shorelines	July to Septembe	April to May	25 days	June to mid July	1 year
Rallidae (Rails, Coofs and Gallinules)	*Porzana carolina* (Sora)	Swamps, salt marshes (mainly in winter)	Spring: late May	mid June	16 to 20 days	August	

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MAMMALS

FAMILY	GENUS SPECIES	HABITAT	MATING SEASON	BIRTH PERIOD	INDEPENDENCE FROM PARENTS	SEXUAL MATURITY
Castoridae	*Castor canadensis* beaver	lakes and stream bordered with poplars, birches or other food trees	Jan to Feb	usually May but sometimes as late as September	kits stay with the parents for two years	2-3 years
Cricetidae	*Zibethicus* muskrat	freshwater marshes and slow moving streams	immediately after spring break up in March, April or May	less than one month after mating; females normally have another litter one month after the first	6 weeks after birth	1 year