

Columbia Shuswap Regional Invasive Species Watch List March 2023

PROVINCIAL PRIORITY DEFINITIONS (as per February 2020 list: https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/provincial_priority_is_list_final2019_march2_2020_posted_online.pdf)		
Prevent	1	Species determined to be high risk to BC and not yet established. Management objective is to prevent the introduction and establishment.
Provincial EDRR	2	Species is high risk to BC and is new to the Province. Management objective is eradication.
Provincial Containment	3	Species is high risk with limited extent in BC but significant potential to spread. Management objective is to prevent further expansion into new areas with the ultimate goal of reducing the overall extent.
Regional Containment/Control	4	Species is high risk and well established, or medium risk with high potential for spread. Management objective is to prevent further expansion into new areas within the region through establishment of containment lines and identification of occurrences outside the line to control.
Management	5	Species is more widespread but may be of concern in specific situations with certain high values - e.g., conservation lands, specific agriculture crops. Management objective is to reduce the invasive species impacts locally or regionally, where resources are available.
Not listed	6	Species not listed by the Province, but presence/absence data collected for Columbia Shuswap region.

Note: the purpose of this watch-list is to improve awareness and reporting in the Columbia Shuswap region. For priority ranking, risk assessments and management tools for invasive species, the Province of BC is the authority. To report invasive species, go to: www.reportinvasives.ca

Amphibians	Priority	Genus	Species	Present in CSRD?	Known Location(s)
American bullfrog	4	<i>Lithobates</i>	<i>catesbeianus</i>	Absent	BC: Creston Valley, Nelway, Lower Mainland to Sunshine Coast, Vancouver Island, Okanagan (populations may be eradicated) USA: Idaho
Green frog	4	<i>Lithobates</i>	<i>clamitans</i>	Absent	BC: Lower Mainland, Southern Vancouver Island
Birds	Priority	Genus	Species	Present in CSRD?	Known Location(s)
American black duck	5	<i>Anas</i>	<i>rubripes</i>	Unknown	BC: Southern Vancouver Island
Eurasian collared dove	5	<i>Streptopelia</i>	<i>decaocto</i>	Present	CSRD
European house sparrow	5	<i>Passer</i>	<i>domesticus</i>	Present	CSRD
European starling	5	<i>Sturnus</i>	<i>vulgaris</i>	Present	CSRD
Mute swan	5	<i>Cygnus</i>	<i>olor</i>	Unknown	BC: Southern Vancouver Island, Vancouver
Rock pigeon	5	<i>Columba</i>	<i>livia</i>	Present	CSRD: Salmon Arm (iNaturalist observation)
Wild turkey	5	<i>Meleagris</i>	<i>gallopavo</i>	Unknown	CSRD: Golden(?)
California Quail	6	<i>Callipepla</i>	<i>californica</i>	Present	CSRD: Shuswap region

Chukar partridge	6	<i>Alectoris</i>	<i>chukar</i>	Unknown	BC: South Okanagan, Kamloops
Disease	Priority	Genus	Species	Present in CSRD?	Known Location(s)
Chytrid fungus	1	<i>Batrachochytrium</i>	<i>dendrobatidis</i>	Present	Found widespread across BC
Ranavirus	1	<i>Ranavirus</i>	<i>spp.</i>	Absent	Confirmed in northern BC in 2022
Whirling disease	1	<i>Myxobolus</i>	<i>cerebralis</i>	Absent	AB: BNP, Southern Alberta including Bow, Old Man, Spray, Red Deer, North Saskatchewan and Crowsnest Rivers
White-nose syndrome	1	<i>Pseudogymnoascus</i>	<i>destructans</i>	Unknown	Canada: MB/SK border
Bovine tuberculosis	6	<i>Mycobacterium</i>	<i>bovis</i>	Unknown	AB: Wood Buffalo National Park MB: Riding Mountain National Park
Chronic wasting disease	6	Abnormal protein called a Prion		Absent	Current USGS map shows none in BC but there is concern in the Peace region and the Kootenays as wild populations may have it.
Fish	Priority	Genus	Species	Present in CSRD?	Known Location(s)
American Shad	1	<i>Alosa</i>	<i>sapidissima</i>	Present	CSRD: Williamson Lake
Amur goby	1	<i>Rhinogobius</i>	<i>brunneus</i>	Absent	
Bighead carp (Asian)	1	<i>Hypophthalmichthys</i>	<i>nobilis</i>	Absent	
Bitterling	1	<i>Rhodeus</i>	<i>species</i>	Absent	
Black carp (Asian)	1	<i>Mylopharyngodon</i>	<i>piceus</i>	Absent	
Channel catfish	1	<i>Ictalurus</i>	<i>punctatus</i>	Absent	
Grass carp (Asian)	1	<i>Ctenopharyngodon</i>	<i>idella</i>	Absent	
Green sunfish	1	<i>Lepomis</i>	<i>cyanellus</i>	Absent	
Monkey goby	1	<i>Neogobius</i>	<i>fluviatilis</i>	Absent	
Muskellunge	1	<i>Esox</i>	<i>masquinongy</i>	Absent	
Prussian carp	1	<i>Carassius</i>	<i>carassius</i>	Absent	
Red bellied piranha	1	<i>Pygocentrus</i>	<i>nattereri</i>	Absent	
Rock bass	1	<i>Ambloplites</i>	<i>rupestris</i>	Absent	
Round goby	1	<i>Neogobius</i>	<i>melanostomus</i>	Absent	
Silver carp (Asian)	1	<i>Hypophthalmichthys</i>	<i>molitrix</i>	Absent	
Snakehead (Northern, Blotched, Rainbow)	1	<i>Channa</i>	<i>argus, bleheri, maculata</i>	Absent	BC: Northern snakehead eradicated from Burnaby Lake
Spottail shiner	1	<i>Notropis</i>	<i>hudsonius</i>	Absent	Note: Native to Peace River region
Tubenose goby	1	<i>Proterorhinus</i>	<i>semilunaris</i>	Absent	
Tui chub	1	<i>Gila</i>	<i>bicolor</i>	Absent	
Warmouth	1	<i>Lepomis</i>	<i>gulosus</i>	Absent	
Western mosquitofish	1	<i>Gambusia</i>	<i>affinis</i>	Absent	AB: Banff National Park (Banff Hot Springs)
White cloud mountain minnow	1	<i>Tanichthys</i>	<i>albonubes</i>	Absent	

Oriental weather loach	2	<i>Misgurnus</i>	<i>anguillicaudatus</i>	Absent	BC: Lower Fraser valley
Rosy red minnow (Fathead minnow)	2	<i>Pimephales</i>	<i>promelas</i>	Absent	BC: Lower Fraser valley, Two Island Lake (near Tupper)
Goldfish	4	<i>Carassius</i>	<i>auratus</i>	Present	CSRD: White Lake, Shuswap Lake, Canoe Pond (70th Ave Canoe), McGuire Lake (Salmon Arm)
Northern Pike	4	<i>Esox</i>	<i>lucius</i>	Absent	iMap BC shows at Pearson Crossing Columbia Wetlands: this is an incorrect GPS location. Northern pike have also been confirmed a few times in Koocanusa Reservoir during Montana State gill net assessments and I have confirmed northern pike caught on two occasions in the mainstem upper Kootenay River near Canal Flats and again in the lower St. Mary River (upper Kootenay River tributary) near the St. Eugene Mission. Those are the only confirmed catch records. (Source: Fish Biologist Kootenay region via Khaylish Fraser)
Yellow perch	4	<i>Perca</i>	<i>flavescens</i>	Present	CSRD: Upper Arrow Lake, Williamson Lake, Pinaus Lake, Little Pinaus Lake, Square Lake, Cedar Creek; Reported in Forest lake which drains into Adams Lake (Brennan Lund, ALIB).
Black crappie	5	<i>Pomoxis</i>	<i>nigromaculatus</i>	Absent	BC: Lower Fraser valley, South Okanagan valley, Trail
Bluegill sunfish	5	<i>Lepomis</i>	<i>macrochirus</i>	Absent	BC: South Okanagan
Largemouth bass	5	<i>Micropterus</i>	<i>salmoides</i>	Absent	BC: Lower Fraser valley, South Okanagan, Creston, Lower Kootenay River
Bullhead (Yellow, Black, Brown)	5	<i>Ameiurus</i>	<i>natalis, melas, nebulosus</i>	Absent	<i>melas</i> - BC: Okanagan, Kootenay River near Creston
Common carp	5	<i>Cyprinus</i>	<i>carpio</i>	Present	CSRD: Shuswap Lake, Upper Arrow Lake, Canoe Pond (70th Ave Canoe), Larch Hills Lake RDNO: Shuswap River (Enderby)
Pumpkinseed sunfish	5	<i>Lepomis</i>	<i>gibbosus</i>	Absent	CSRD: rotenone treatment in Skimikin Lake
Smallmouth bass	5	<i>Micropterus</i>	<i>dolomieu</i>	Absent	CSRD: rotenone treatment in Gardom Lake
Trench	5	<i>Tinca</i>	<i>tinca</i>	Absent	BC: Okanagan, Kootenay River (near Creston)
Walleye (southern BC)	5	<i>Sander</i>	<i>vitreus</i>	Absent	BC: Castlegar, Lower Arrow Lake
Atlantic salmon	6	<i>Salmo</i>	<i>salar</i>	Absent	BC: Lower Fraser Valley
Brown Trout	6	<i>Salmo</i>	<i>trutta</i>	Present	CSRD: Trout Lake
Eastern Brook Trout	6	<i>Salvelinus</i>	<i>fontinalis</i>	Present	CSRD: Gardom Lake, Columbia River System (iMapBC) *All IPMA's (consensus at land manager meeting)
Fathead minnow	6	<i>Pimephales</i>	<i>promelas</i>	Absent	BC: Lower Fraser valley, Two Island Lake (near Tupper)
Rainbow trout	6	<i>Oncorhynchus</i>	<i>mykiss</i>	Present	CSRD: all IPMAs

Red bellied pacu	6	<i>Piaractus</i>	<i>brachypomus</i>	Absent	BC: One caught in Nanaimo and one caught in Williams Lake but neither have established populations
Red shiner	6	<i>Cyprinell</i>	<i>lutrensis</i>	Absent	
Fungi	Priority	Genus	Species	Present in CSRD?	Known Location(s)
Death cap	3	<i>Amanita</i>	<i>phalloides</i>	Absent	BC: Vancouver, Victoria, Lower Fraser valley
White pine blister rust	6	<i>Cronartium</i>	<i>ribicola</i>	Present	CSRD: all IPMAs
Insects	Priority	Genus	Species	Present in CSRD?	Known Location(s)
Spotted lantern fly	1	<i>Lycorma</i>	<i>delicatula</i>	Absent	
Asian giant hornet	2	<i>Vespa</i>	<i>mandarina</i>	Absent	BC: Eradicated from Nanaimo in 2019, confirmed in the Fraser Valley in 2020
Asian longhorned beetle	2	<i>Anoplophora</i>	<i>glabripennis</i>	Absent	
Spongy moths (Asian & European)	2	<i>Lymantria</i>	<i>spp.</i>	Unknown	Parks Canada: potentially trapping/monitoring in parks (unconfirmed), one detection in Revelstoke, one detection in Jasper
Japanese beetle	2	<i>Popillia</i>	<i>japonica</i>	Absent	BC: Vancouver
Apple maggot	3	<i>Rhagoletis</i>	<i>pomonella</i>	Absent	BC: Lower Mainland, Prince George
Argentine ant	4	<i>Linepithema</i>	<i>humile</i>	Absent	BC: Victoria
Asian needle ant	4	<i>Pachycondyla</i>	<i>chinensis</i>	Absent	
European fire ant	4	<i>Myrmica</i>	<i>rubra</i>	Absent	BC: Naramata, Vancouver, Southern Vancouver Island
Balsam woolly adelgid	5	<i>Adelges</i>	<i>piceae</i>	Present	Parks Canada: monitoring at MRG
Brown marmorated stink bug	5	<i>Halyomorpha</i>	<i>halys</i>	Present	CSRD: north of Salmon Arm (confirmed iNaturalist observation)
Drumming katydid	5	<i>Meconema</i>	<i>thalassinum</i>	Absent	
European chafer beetle	5	<i>Amphimallon</i>	<i>majale</i>	Absent	BC: Vancouver
European paper wasp	5	<i>Polistes</i>	<i>dominula</i>	Present	CSRD: All IPMAs
Large yellow underwing	5	<i>Noctua</i>	<i>pronuba</i>	Present	
Praying mantis	5	<i>Mantis</i>	<i>religiosa</i>	Present	
Spotted wing drosophila	5	<i>Drosophila</i>	<i>suzukii</i>	Present	CSRD: Columbia Basin
Winter moth	5	<i>Operophtera</i>	<i>brumata</i>	Absent	BC: Vancouver, Southern Vancouver Island
Woodlouse spider	5	<i>Dysdera</i>	<i>crocata</i>	Absent	BC: Victoria
Coddling moth	6	<i>Cydia</i>	<i>pomonella</i>	Present	CSRD: orchards in Salmon Arm
Garden soldier fly	6	<i>Exaireta</i>	<i>spinigera</i>	Unknown	
Impressive fire ant	6	<i>Myrmica</i>	<i>specioides</i>	Unknown	

Little fire ant	6	<i>Wasmannia</i>	<i>auropunctata</i>	Unknown	
Seven-spotted ladybug	6	<i>Coccinella</i>	<i>septempunctata</i>	Present	CSRD: All IPMAs
Tropical stinging ant	6	<i>Hypoponera</i>	<i>punctatissima</i>	Unknown	
Western yellow striped armyworm	6	<i>Spodoptera</i>	<i>praefica</i>	Unknown	BC: Reported for the first time in the North Okanagan Valley (Enderby, Armstrong and Spallumcheen) in July 2018
Invertebrates	Priority	Genus	Species	Present in CSRD?	Known Location(s)
Apple snail	1	<i>Ampullariidae</i>	spp.	Absent	
Conrad's false mussel	1	<i>Mytilopsis</i>	<i>leucophaeata</i>	Absent	
Marbled crayfish	1	<i>Procambarus</i>	<i>fallax f. virginalis</i>	Absent	
Quagga mussel	1	<i>Dreissena</i>	<i>bugensis</i>	Absent	Canada: Manitoba
Ringed crayfish	1	<i>Orconectes</i>	<i>neglectus</i>	Absent	
Rusty crayfish	1	<i>Orconectes</i>	<i>rusticus</i>	Absent	
Spiny waterflea	1	<i>Bythotrephes</i>	<i>longimanus</i>	Absent	
Northern crayfish	1	<i>Orconectes</i>	<i>virilis</i>	Absent	AB: Single individual confirmed in Bow Lake in 2022
Zebra mussel	1	<i>Dreissena</i>	<i>polymorpha</i>	Absent	Canada: Manitoba
European Brown garden snail	2	<i>Cornu</i>	<i>aspersum</i>	Unknown	
Red swamp crayfish	2	<i>Procambarus</i>	<i>clarkii</i>	Absent	BC: Lower Mainland
Cherry shrimp	3	<i>Neocaridina</i>	<i>davidi</i>	Absent	
Chinese, Japanese and other mystery snails	3	<i>Cipangopaludina</i> spp./ <i>Bellamya</i>	<i>chinensis</i>	Absent	BC: Lower Fraser Valley (up to Hope), Southern Vancouver Island Idaho: Priest Lake
Freshwater clam	3	<i>Corbicula</i>	<i>fluminea</i>	Absent	CSRD: Shuswap Lake (Salmon Arm, Sicamous Narrows) Washington: Pend d'Oreille
New Zealand mudsnail	3	<i>Potamopyrgus</i>	<i>antipodarum</i>	Absent	BC: Vancouver Island (Port Alberni) Washington: Spokane
Banded garden snail	5	<i>Cepaea</i>	<i>nemoralis</i>	Present	CSRD: Golden, Revelstoke
Freshwater jellyfish	5	<i>Craspedacusta</i>	<i>sowerbyi</i>	Unknown	BC: Okanagan Lake, Kamloops, Lower Nainland, Sunshine Coast, Vancouver Island
Land slugs	5	<i>Arion</i>	<i>rufus</i> and <i>vulgaris</i>	Present	<i>rufus</i> - CSRD
European black slug	6	<i>Arion</i>	<i>ater</i>	Unknown	CSRD: potentially MRG
Giant garden slug/ leopard slug/ great grey slug	6	<i>Limax</i>	<i>maximus</i>	Present	CSRD: Revelstoke
Japanese mussel / Asian date mussel	6	<i>Musculista</i>	<i>senhousia</i>	Absent	
New Zealand green-lipped mussel	6	<i>Perna</i> spp.		Absent	

Northern quahog clam	6	<i>Mercenaria</i>	<i>mercenaria</i>	Absent	
Spanish slug	6	<i>Arion</i>	<i>vulgaris</i>	Absent	
Varnish clam	6	<i>Nuttalia</i>	<i>obscurata</i>	Absent	
Mammals	Priority	Genus	Species	Present in CSRD?	Known Location(s)
Nutria	1	<i>Myocastor</i>	<i>coypus</i>	Absent	BC: south Vancouver US: Oregon
Fallow deer	3	<i>Dama</i>	<i>dama</i>	Absent	BC: Vancouver Island, Lower Fraser Valley(?), Kelowna (HabitatWizard observation, accuracy unknown)
Feral swine	3	<i>Sus</i>	<i>scrofa</i>	Absent	BC: Lumby (no evidence of established population), Christina Lake(?), Williams Lake(?)
Virginia opossum	3	<i>Didelphis</i>	<i>virginiana</i>	Absent	BC: Lower Fraser Valley, Vancouver Island
Eastern fox squirrel	4	<i>Sciurus</i>	<i>niger</i>	Absent	BC: Southern Okanagan
Eastern grey squirrel	4	<i>Sciurus</i>	<i>carolinensis</i>	Absent	BC: Vernon, Falkland
European rabbit	4	<i>Oryctolagus</i>	<i>cuniculus</i>	Present	CSRD: unconfirmed in Revelstoke (Big Eddy)
Norway/Brown rat	4	<i>Ratus</i>	<i>norvegicus</i>	Absent	BC: Nelson (unconfirmed)
Roof/Black rat	4	<i>Ratus</i>	<i>ratus</i>	Present	CSRD: Revelstoke, Sicamous, Shuswap
Eastern cottontail rabbit	5	<i>Sylvilagus</i>	<i>floridanus</i>	Absent	BC: Lower Mainland, Vancouver Island
House mouse	6	<i>Mus</i>	<i>musculus</i>	Present	CSRD
Reptiles	Priority	Genus	Species	Present in CSRD?	Known Location(s)
Italian wall lizard	1	<i>Podarcis</i>	<i>siculus</i>	Absent	BC: Vancouver
European wall lizard	4	<i>Podarcis</i>	<i>muralis</i>	Unknown	CSRD: Reported at Little River Bridge (unconfirmed)
Red-eared slider	4	<i>Trachemys</i>	<i>scripta</i>	Absent	CSRD: Justin DeMerchant (ISCBC) did comprehensive turtle surveys in 2022 and found none in the shuswap
Snapping turtle	4	<i>Chelydra</i>	<i>serpentina</i>	Absent	BC: Port Alberni
Softshell turtle	6	<i>Apalone</i>	spp.	Absent	
Western fence lizard	6	<i>Sceloporus</i>	<i>occidentalis</i>	Absent	