

Appendix 1. Locality name by mitochondrial DNA (mtDNA) clade membership, geographic coordinates, and sample size for mtDNA cytochrome *b* sequence analysis for specimens of lake chub (*Couesius plumbeus*) and outgroup taxa. AB = Alberta, BC = British Columbia, LB = Labrador, MB = Manitoba, MN = Minnesota, NS = Nova Scotia, NB = New Brunswick, NWT = Northwest Territories, NY = New York, ON = Ontario, QC = Québec, SK = Saskatchewan, WY = Wyoming, YT = Yukon Territory. Localities annotated with a “*”, “#”, or “^” represent putative *Couesius plumbeus greeni*, *C. p. dissimilis*, and *C. p. plumbeus*, respectively.

Locality	Latitude/longitude	N	Haplotypes present
Lake chub: Western clade			
*Jewel Lake, BC	49°10'29" 118°36'35"	5	Cp33, 34
*Eleonor Lake, BC	54°14'51" 125°25'39"	2	Cp3, 16
*Canim Lake, BC	51°51'32" 120°44'58"	5	Cp3
*Needle Lake, BC	53°48'53" 127°00'19"	3	Cp3
*Bog Pond, BC	54°29'19" 122°40'52"	1	Cp3
*Huble Lake, BC	54°16'10" 122°36'59"	12	Cp3, 16
*Pothole Lakes, BC	55°35'39" 123°22'42"	3	Cp15, 29
*Arctic Lake, BC	54°25'13" 121°40'26"	5	Cp3
*Green Lake, BC	51°22'35" 121°15'47"	8	Cp3, 6
*Tezzeron Lake, BC	54°43'54" 124°29'01"	3	Cp3, 13
*Mill Creek, BC	58°15'52" 123°41'17"	5	Cp3, 30
*Liard Hotsprings, BC	59°25'43" 126°05'18"	10	Cp3, 7, 30
*Atlin Warmspring, BC	59°24'14" 133°34'31"	10	Cp3, 30
*Greywatch Creek, BC	57°15'56" 122°14'39"	1	Cp3
*Hutchinson Creek, BC	59°24'14" 133°34'31"	1	Cp3
*Blueberry Creek, BC	56°44'60" 121°42'50"	1	Cp3
*Hornline Creek, BC	59°58'46" 127°23'44"	1	Cp3
*Dina Lake No. 1, BC	55°31'39" 123°18'46"	2	Cp3
*Alexander Creek, BC	56°31'15" 121°46'47"	2	Cp3
*Tetsa River, BC	58°38'19" 124°09'39"	2	Cp3
*Quartet Lake, YT	65°07'30" 134°26'46"	1	Cp3
*Yukon River, YT ¹	Unknown	1	Cp1
#Nahanni River, NWT ²	61°57'29" 127°13'02"	8	Cp3, 35 - 40
#Mackenzie River, NWT	69°03'31" 134°44'10"	4	Cp3, 26, 27, 28
#Smoky River, AB ³	55°14'08" 118°15'33"	1	Cp20
#Economy Creek, AB	54°52'53" 118°15'13"	1	Cp8
#Medley River, AB	53°56'11" 110°31'30"	2	Cp2
#Rolph Creek, AB	49°07'13" 113°08'29"	2	Cp3
#South Milk River, AB	49°05'23" 112°23'52"	2	Cp11
#St. Mary River, AB	49°05'07" 113°13'27"	2	Cp14

Appendix 1. Cont.

Locality	Latitude/longitude	N	Haplotypes present
#Swift Current Creek, SK	50°36'04" 107°43'29"	2	Cp14
#Frenchman River, SK	49°05'56" 107°24'16"	2	Cp14
#Rock Creek, SK	49°00'04" 106°47'54"	2	Cp14
#Hayes Creek, MB	56°17'32" 95°22'13"	5	Cp20, 24, 25
#Churchill River, MB	57°48'15" 95°20'41"	5	Cp21, 22, 23
#Squaw Creek, WY	42°50'38" 109°11'13"	2	Cp10
#Nowood River, WY	44°15'46" 107°58'07"	2	Cp10
Lake chub: Eastern clade			
^Turkey Lake, ON	47°02'53" 84°25'09"	3	Cp17, 19
^Magpie Lake, ON	50°37'11" 92°24'05"	2	Cp12
^Vineland Creek, ON	45°11'38" 79°23'38"	1	Cp17
^Sheridan Creek, ON	43°31'02" 79°36'54"	1	Cp17
^Lake Huron, ON	46°07'37" 82°52'02"	1	Cp18
^Nephigee R., LB	58°31'59" 68°18'00"	5	Cp17
^Coady's Pond No. 1, LB	56°31'18" 63°53'35"	5	Cp18
^Lac-Legendre, QC	46°38'19" 74°18'10"	5	Cp18
^Lac Dalpec, QC	46°45'14" 74°21'19"	4	Cp18, 31
^Lac Aigneau, QC	57°13'00" 70°07'28"	5	Cp17
^Chiganois River, NS	45°24'45" 63°46'47"	9	Cp4
^Catamaran Brook, NB	46°52'53" 66°05'57"	5	Cp4, 5
^Little River tributary, NY	44°00'41" 74°35'42"	3	Cp17
#Lake Superior, MN	47°23'13" 91°07'45"	4	Cp9, 32
Outgroups			
Redside shiner (<i>Richardsonius balteatus</i>)			
Main Creek, UT ³	40°23'38" 111°26'31"	1	
Yakima River, WA ⁴	46°25'01" 120°19'51"	1	
Peamouth chub (<i>Mylocheilus caurinus</i>)			
Stave Lake, BC ⁵	49°21'30" 122°17'46"	1	

¹ Genbank accession number AF452083.² Unnamed lake adjacent to river.³ Genbank accession number GU182814.⁴ Approximate coordinates only, Genbank accession number GU182876.⁵ Genbank accession number AF117169.