Table 1. Some larval characters measured from the specimens collected in this study. All measurements are in µm unless otherwise noted.

A)	Larvae (mm)	HL	HW	HL/HW	A_1	A_2	A_3	A_4	A_5	A_6	A_7	A_8	Flagellum	AR	Blade	B_2
Subfamily Tanypodinae																
***Ablabesmyia (s.s.)* sp.**	3.2	577.2	402.3	1.4	232.0	72.6	6.6	3.7	–	–	–	–	82.9	2.8	76.0	–
Meropelopia americana	7.3	979.2	892.0	1.1	435.7	73.2	8.0	6.7	–	–	–	–	87.9	5.0	77.3	–
Meropelopia flavifrons	7.0	748.8	679.2	1.1	281.8	48.6	6.3	5.6	–	–	–	–	60.5	4.7	52.2	9.2
Nilotanypus fimbriatus	2.3	366.5	203.0	1.8	152.7	44.2	5.8	4.0	–	–			54.0	2.8	55.5	4.1
***Rheopelopia acra* group**	3.1	433.5	330.3	1.3	158.1	42.5	7.6	3.1	–	–	–	–	53.3	3.0	–	9.2
***Procladius (Holotanypus)* sp.**	5.6	563.0	555.9	1.0	110.5	15.5	6.0	3.9	–	–	–	–	25.4	4.4	21.0	6.1
Subfamily Diamesinae																
***Diamesa* sp.**	7.4	390.3	414.9	0.9	73.8	15.2	8.6	2.8	3.9	–	–	–	30.4	2.4	32.1	–
Pagastia orthogonia	2.7	400.0	274.4	1.5	17.2	15.6	5.1	3.4	4.7	–	–	–	28.8	0.6	20.9	9.1
***Potthastia gaedi* group**	5.3	445.5	391.1	1.1	46.0	18.3	6.5	3.4	5.4	–	–	–	33.5	1.4	29.6	10.0
***Potthastia longimanus* group**	4.6	293.2	232.2	1.3	11.5	15.7	4.8	2.3	2.6	–	–	–	25.4	0.5	24.1	–
Subfamily Prodiamesinae *Monodiamesa* sp. 1	7.5	478.1	429.9	1.1	44.6	18.8	3.8	2.9	–	–	–	–	25.6	1.7	–	–
***Monodiamesa* sp. 2**	5.1	273.6	254.3	1.1	20.6	13.9	2.6	2.1	–	–	–	–	18.6	1.1	22.3	–
Subfamily Orthocladiinae																
Brillia flavifrons	6.5	657.6	549.5	1.2	71.4	25.8	10.3	5.7	–	–	–	–	41.8	1.7	–	–
Brillia parva	4.7	687.4	456.5	1.5	88.7	37.0	19.8	6.2	–	–	–	–	63.0	1.4	49.9	–
Cardiocladius* cf. *albiplumus	0.2	145.1	128.6	1.1	11.1	7.0	2.4	4.5	3.1	–	–	–	16.9	0.7	16.0	5.2
***Corynoneura* sp. 1**	1.7	172.5	127.7	1.4	124.9	58.0	79.2	3.3	–	–	–	–	140.5	0.9	–	–
***Corynoneura* sp. 2**	1.3	178.5	98.4	1.8	114.7	76.6	77.2	6.2	–	–	–	–	160.1	0.7	–	–
Cricotopus (s.s.)* cf. *albiforceps	3.9	311.1	300.3	1.0	34.7	9.7	4.6	3.8	3.7	–	–	–	21.8	1.6	20.7	–
Cricotopus mackenziensis	3.1	319.5	331.6	1.0	44.9	15.7	7.1	4.7	5.6	–	–	–	33.0	1.4	30.2	–
***Cricotopus (s.s.) tremulus* group**	3.7	338.4	382.6	0.9	46.6	14.5	6.7	4.8	3.0	–	–	–	29.0	1.6	28.6	10.0
Cricotopus (s.s.) trifascia	5.2	495.8	495.2	1.0	69.2	17.6	7.2	3.6	3.7	–	–	–	32.0	2.2	27.0	13.2
Cricotopus (Nostocladius) nostocicola	4.4	494.1	455.9	1.1	27.8	7.3	3.9	2.8	3.0	–	–	–	17.0	1.6	18.2	5.1
***Doncricotopus* sp.**	4.3	248.9	296.4	0.8	51.9	12.1	7.2	3.2	4.3	–	–	–	26.8	1.9	17.4	9.0
***Epoicocladius* sp. #3 Jacobsen**	3.9	293.1	242.7	1.2	33.7	11.2	2.1	3.8	–	–	–	–	17.1	2.0	16.2	–
***Eukiefferiella gracei* group**	5.9	451.0	458.5	1.0	51.4	11.7	4.6	4.6	5.7	–	–	–	26.6	1.9	23.2	–
Euryhapsis cilium	5.1	350.0	325.9	1.1	63.1	22.1	9.5	5.9	–	–	–	–	37.5	1.7	40.5	–
***Heterotrissocladius marcidus* group**	2.8	213.3	219.3	1.0	33.6	20.4	4.0	10.7	4.7	3.0	2.2		44.9	0.7	32.8	–
***Hydrosmittia* sp.**	2.5	259.1	251.4	1.0	5.3	3.0	2.1	2.2	–	–	–	–	7.3	0.7	8.2	–
***Krenosmittia* sp.**	2.3	139.0	144.0	1.0	31.8	17.5	1.1	1.5	2.4	–	–	–	22.5	1.4	17.4	–
Lopescladius (Cordiella)* cf. *hyporheicus	3.8	152.8	136.2	1.1	80.5	59.2	30.3	9.4	70.7	–	–	–	169.7	0.5	59.4	–
***Nanocladius (s.s.) dichromus* group**	2.6	225.2	269.4	0.8	47.3	17.0	7.6	3.7	2.4	–	–	–	30.6	1.5	26.4	7.3
Orthocladius (Eud.) dubitatus	3.6	379.4	364.6	1.0	35.5	10.4	4.0	3.2	2.6	–	–	–	20.2	1.8	23.0	–
Orthocladius (Euo.) rivicola	4.3	299.5	327.4	0.9	37.1	9.5	3.8	4.2	3.8	–	–	–	21.3	1.7	19.5	3.7
Orthocladius (s.s.)* cf. *clarkei	4.7	368.7	424.2	0.9	40.8	11.4	3.7	3.5	3.2	–	–	–	21.9	1.9	24.5	–
Orthocladius (s.s.) obumbratus	5.1	347.6	400.2	0.9	40.2	11.5	4.6	3.2	4.3	–	–	–	23.5	1.7	24.6	8.2
***Paracricotopus* sp.**	1.2	141.4	137.5	1.0	17.8	10.2	2.7	2.6	3.1	–	–	–	18.5	1.0	16.4	–
***Parakiefferiella* sp. 1**	2.6	253.3	237.5	1.1	35.3	13.4	2.7	3.3	3.3	5.6	–	–	28.3	1.2	15.7	6.4
***Parakiefferiella* sp. 2**	2.2	172.5	188.6	0.9	20.2	9.8	2.8	3.6	3.8	4.3	–	–	24.2	0.8	15.9	–
***Parakiefferiella* sp. 3**	2.6	122.5	135.6	0.9	15.4	9.3	1.9	2.5	2.6	0.9	–	–	17.3	0.9	12.7	5.9
***Parakiefferiella* sp. 4**	2.3	136.1	149.8	0.9	23.4	17.7	2.8	4.2	3.7	2.0	–	–	30.4	0.8	–	–
Parakeifferiella* cf. *gracillima	2.8	167.8	207.2	0.8	21.2	9.3	2.5	2.5	3.9	4.6	–	–	22.9	0.9	14.9	4.9
Parametriocnemus lundbecki	4.0	292.9	321.3	0.9	54.7	19.3	4.2	5.7	4.6	–	–	–	33.7	1.6	22.9	10.6
Psectrocladius (s.s.) limbatellus	5.9	486.9	469.6	1.0	96.9	14.1	8.8	5.5	4.9	–	–	–	33.2	2.9	30.9	6.5
***Rheocricotopus (Psil.) chalybeatus* group**	–	204.8	195.7	1.0	33.4	13.5	3.5	3.3	2.7	–	–	–	23.0	1.5	16.3	–

To be continued on next page

Table 1. Continued from previous page.

A)	Larvae (mm)	HL	HW	HL/HW	A_1	A_2	A_3	A_4	A_5	A_6	A_7	A_8	Flagellum	AR	Blade	B_2
Subfamily Orthocladiinae																
***Stictocladius* sp. G**	5.7	177.8	165.5	1.1	48.5	69.6	6.3	3.2	9.1	–	–	–	88.2	0.6	65.8	–
Thienemanniella xena	2.3	241.0	198.1	1.2	89.8	26.3	25.2	2.2	3.5	–	–	–	57.3	1.6	19.7	–
Tvetenia paucunca	4.0	300.9	269.4	1.1	49.4	17.4	2.3	3.6	3.8	–	–	–	27.1	1.8	18.7	–
Tvetenia tshernovskii	3.7	374.8	322.9	1.2	62.7	16.8	6.3	4.7	4.4				32.1	1.9	29.6	–
Subfamily Chironominae *Beckidia tethys*	4.6	221.9	259.3	0.9	38.5	21.0	22.2	11.5	2.9	3.9	2.3		63.8	0.6	68.9	–
Chernovskiia orbicus	7.8	210.1	208.9	1.0	91.4	26.4	26.9	20.6	6.0	2.3	2.9	2.2	87.2	1.0	43.6	–
***Chironomus (s.s.) decorus* group**	13.9	475.7	460.6	1.0	95.1	23.7	6.6	10.3	7.1	–	–	–	47.7	2.0	43.6	–
***Chironomus (s.s.) salinarius* group**	5.8	508.0	566.6	0.9	108.1	25.1	6.4	8.0	7.2	–	–	–	46.7	2.3	45.1	–
Cryptochironomus blarina	9.3	505.2	476.5	1.1	64.4	33.2	30.7	3.1	4.4	–	–	–	71.4	0.9	26.3	6.3
Demicryptochironomus cuneatus	6.5	345.5	292.6	1.2	55.5	12.2	15.7	10.4	4.9	2.2	2.2		47.5	1.2	24.1	6.0
***Glyptotendipes (Glyptotendipes)* sp.**	2.8	233.7	227.0	1.0	29.6	16.2	11.2	11.0	4.8	–	–	–	43.2	0.7	52.3	5.9
***Microtendipes (s.s.) pedellus* group**	6.9	417.6	409.6	1.0	96.6	15.4	20.1	15.4	11.2	6.5	–	–	68.5	1.4	65.5	–
***Microtendipes (s.s.) rydalensis* group**	2.1	222.1	201.2	1.1	45.5	13.9	19.1	10.0	6.3	4.2	–	–	53.6	0.8	30.8	–
Paracladopelma* cf. *rolli	7.9	320.8	308.0	1.0	74.5	40.5	4.4	4.8	3.6	–	–	–	53.2	1.4	49.5	–
Paracladopelma nereis	5.2	222.0	255.9	0.9	39.8	27.3	3.5	2.1	3.5	–	–	–	36.3	1.1	31.5	–
Paralauterborniella nigrohalteralis	2.0	152.4	137.6	1.1	19.6	9.0	5.2	3.0	4.0	3.1	–	–	24.3	0.8	19.3	–
Paratendipes* cf. *basidens	6.2	308.3	227.5	1.4	39.3	11.8	14.7	8.6	7.5	4.3	–	–	42.5	0.9	41.9	–
***Phaenopsectra punctipes* group**	2.1	224.9	252.9	0.9	23.1	13.2	5.3	4.1	3.1		–	–	25.7	0.9	31.6	–
***Polypedilum (s.s) fallax* group**	8.7	486.6	472.8	1.0	61.4	18.3	7.6	6.8	4.7	–	–	–	37.4	1.6	27.0	7.5
***Polypedilum (s.s.) laetum* group**	7.2	346.1	347.5	1.0	51.4	14.6	9.3	13.5	5.7	–	–	–	43.1	1.2	34.7	6.5
***Polypedilum (Tripodura) scalaenum* group**	3.3	251.9	225.7	1.1	38.1	19.4	3.7	10.6	3.6	–	–	–	37.3	1.0	38.2	5.8
Polypedilum (Uresipedilum) flavum	5.0	349.8	324.6	1.1	60.1	21.9	8.1	7.9	6.1	–	–	–	43.9	1.4	36.8	–
Robackia claviger	7.4	255.7	203.4	1.3	49.5	34.9	18.7	16.4	21.2	4.2	3.4	–	98.8	0.5	43.2	–
Robackia demeijerei	4.4	198.6	140.2	1.4	37.1	27.6	16.7	10.5	8.1	2.1	2.8	–	67.7	0.5	27.5	–
***Stenochironomus (s.s.)* sp.**	14.0	721.4	690.0	1.0	81.3	19.3	9.3	11.3	4.5	–	–	–	44.4	1.8	21.1	–
***Stictochironomus* sp.**	6.8	289.8	390.9	0.7	65.0	16.6	9.0	11.6	7.0	5.4	–	–	49.6	1.3	55.4	–
***Cladotanytarsus* sp.**	3.8	191.4	188.3	1.0	47.0	11.1	17.2	8.9	5.6	–	–	–	42.8	1.1	39.9	–
Micropsectra polita	5.0	402.5	443.8	0.9	228.4	75.9	10.8	9.3	6.3	–	–	–	102.4	2.2	51.8	–
Neostempellina reissi	2.1	216.1	261.3	0.8	41.9	11.1	15.8	17.0	9.8	–	–	–	53.6	0.8	55.5	–
***Paratanytarsus* sp.**	2.4	214.6	246.0	0.9	62.5	23.4	8.5	6.8	4.3	–	–	–	43.1	1.5	33.7	–
***Rheotanytarsus* sp. 1**	1.8	185.7	199.9	0.9	59.6	16.9	7.2	5.0	4.2	–	–	–	33.3	1.8	28.2	–
***Rheotanystarsus* sp. 2**	3.7	225.0	287.4	0.8	88.7	23.4	8.2	4.6	3.9	–	–	–	40.1	2.2	34.8	–
***Stempellina* sp.**	2.1	214.8	275.5	0.8	55.1	16.7	10.9	9.4	8.0	–	–	–	45.0	1.2	80.6	19.9
***Stempellinella* sp.**	2.2	192.8	222.0	0.9	42.4	30.2	10.6	7.7	5.9	–	–	–	54.5	0.8	40.2	–
***Tanytarsus chinyensis* group**	3.0	245.9	265.2	0.9	116.9	59.0	10.1	6.1	5.6	–	–	–	80.8	1.4	30.9	4.3

B)	Mentum L	Mentum W	Mentum L/W	Mandibles L	A_1/ Mandible L	Premandible L	VmP L	VmP W	Posterior parapod L	Posterior parapod W	Procercus L	Procercus W	Longest body setae	Apical setae L	Sub-apical setae
Subfamily Tanypodinae															
***Ablabesmyia (s.s.)* sp.**	–	–	–	105.1	2.2	–	–	–	132.4	34.0	36.1	13.2	47.7	119.9	–
Meropelopia americana	–	–	–	208.2	2.1	–	–	–	586.8	263.6	140.8	48.0	450.5	1034.4	104.5
Meropelopia flavifrons	–	–	–	156.8	1.8	–	–	–	477.7	235.9	102.8	36.0	455.5	775.1	–
Nilotanypus fimbriatus	–	–	–	40.8	3.7	–	–	–	260.6	64.8	58.5	14.4	147.0	250.0	–
***Rheopelopia acra* group**	–	–	–	74.5	2.1	–	–	–	294.4	124.6	65.5	22.6	389.1	469.8	–
***Procladius (Holotanypus)* sp.**	–	–	–	139.8	0.8	–	–	–	–	–	–	–	612.1	–	–

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Table 1. Continued from previous page.

B)	Mentum L	Mentum W	Mentum L/W	Mandibles L	A_1/ Mandible L	Premandible L	VmP L	VmP W	Posterior parapod L	Posterior parapod W	Procercus L	Procercus W	Longest body setae	Apical setae L	Sub-apical setae
Subfamily Diamesinae *Diamesa* sp.	94.7	134.3	–	174.2	0.4	85.3	–	–	458.4	201.5	16.1	22.2	–	300.9	–
Pagastia orthogonia	65.4	27.5	2.4	82.3	0.2	–	39.9	14.0	100.3	69.8	30.9	20.9	194.6	17.6	–
Potthastia gaedi group	123.4	50.2	2.5	100.8	0.5	75.4	64.3	10.7	191.0	130.4	13.8	11.9	108.9	212.5	34.5
Potthastia longimanus group	71.1	31.5	2.3	55.3	0.2	43.6	–	–	145.7	107.8	19.2	15.2	99.1	205.6	–
Subfamily Prodiamesinae															
Monodiamesa sp. 1	102.2	127.1	0.8	137.7	0.3	71.9	134.1	26.0	135.1	107.3	48.1	29.7	–	533.2	162.6
Monodiamesa sp. 2	48.5	73.3	0.7	76.3	0.3	45.1	62.7	10.3	136.1	119.7	33.4	26.4	–	400.8	218.0
Subfamily Orthocladiinae															
Brillia flavifrons	133.4	178.0	0.7	180.2	0.4	64.1	–	0.9	187.9	158.6	44.9	29.6	–	726.7	–
Brillia parva	122.1	176.8	0.7	191.5	0.5	–	–	–	245.7	124.9	64.8	53.4	–	638.1	–
Cardiocladius cf. *albiplumus*	24.4	34.4	0.7	41.0	0.3	27.1	10.2	2.9	68.7	46.5	8.9	8.5	65.6	190.7	25.5
Corynoneura sp. 1	32.1	29.3	1.1	27.5	4.5	–	–	–	115.9	34.1	7.1	6.8	–	105.6	–
Corynoneura sp. 2	33.5	27.8	1.2	30.8	3.7	–	–	–	128.8	33.0	–	–	–	157.5	–
Cricotopus (s.s.) cf. *albiforceps*	58.9	104.4	0.6	100.3	0.3	68.6	–	–	48.9	40.9	23.2	29.2	–	524.4	–
Cricotopus mackenziensis	65.1	119.7	0.5	116.9	0.4	64.0	63.6	11.0	–	–	–	–	–	–	–
Cricotopus (s.s.) tremulus group	64.4	129.8	0.5	121.7	0.4	70.6	–	–	100.3	78.1	12.3	13.3	148.5	219.9	–
Cricotopus (s.s.) trifascia	89.7	148.0	0.6	166.2	0.4	96.6	–	–	–	–	–	–	–	392.7	–
Cricotopus (Nostocladius) nostocicola	59.2	104.4	0.6	119.4	0.2	71.1	–	–	188.7	146.2	14.2	13.8	–	156.1	–
Doncricotopus sp.	66.6	103.9	0.6	116.3	0.4	67.1	61.9	10.5	136.1	129.9	18.0	22.3	–	284.4	–
Epoicocladius sp. #3 Jacobsen	39.9	74.0	0.5	78.4	0.4	42.4	37.8	8.8	130.5	92.5	48.2	51.0	–	751.1	114.0
Eukiefferiella gracei group	81.0	130.5	0.6	117.3	0.4	89.3	–	–	251.2	128.8	15.3	17.9	122.8	261.8	–
Euryhapsis cilium	81.8	122.9	0.7	106.2	0.6	82.7	–	–	153.2	104.9	44.1	32.4	–	525.3	–
Heterotrissocladius marcidus group	59.3	90.0	0.7	70.9	0.5	39.6	46.6	7.1	–	–	21.0	19.2	–	177.4	–
Hydrosmittia sp.	39.9	71.2	0.6	61.6	0.1	–	25.5	7.2	–	–	–	–	–	–	–
Krenosmittia sp.	32.9	47.2	0.7	42.8	0.7	32.3	–	–	84.5	29.1	29.7	22.9	–	328.4	–
Lopescladius (Cordiella) cf. *hyporheicus*	22.3	30.5	0.7	40.2	2.0	26.3	–	–	79.5	43.1	91.1	28.8	–	424.3	–
Nanocladius (s.s.) dichromus group	36.4	67.8	0.5	75.9	0.6	40.1	88.3	16.1	167.7	110.0	18.7	18.2	–	337.9	–
Orthocladius (Eud.) dubitatus	67.1	125.5	0.5	127.8	0.3	80.7	108.6	–	64.6	46.4	7.7	10.2	–	190.3	–
Orthocladius (Euo.) rivicola	58.7	91.1	0.6	100.7	0.4	69.7	65.0	9.7	296.3	157.0	19.3	26.6	–	397.9	–
Orthocladius (s.s.) cf. *clarkei*	68.9	138.2	0.5	132.4	0.3	90.2	88.3	–	225.7	147.3	17.3	23.6	–	387.5	–
Orthocladius (s.s.) obumbratus	65.3	138.0	0.5	115.0	0.3	81.4	90.7	8.2	151.1	132.3	–	–	–	–	–
Paracricotopus sp.	30.6	37.5	0.8	37.7	0.5	25.7	–	–	58.9	33.2	13.9	9.3	72.8	218.8	–
Parakiefferiella sp. 1	39.3	80.4	0.5	80.2	0.4	53.0	46.4	9.3	82.4	59.5	16.5	13.7	–	671.5	–
Parakiefferiella sp. 2	65.5	34.6	1.9	68.7	0.3	41.8	33.9	7.1	42.9	51.4	14.2	12.0	–	257.0	–
Parakiefferiella sp. 3	29.1	62.9	0.5	63.3	0.2	37.4	36.1	10.7	51.8	58.2	11.5	9.7	–	250.2	–
Parakiefferiella sp. 4	29.3	43.5	0.7	50.1	0.5	30.7	22.6	5.4	75.9	42.0	13.2	16.5	–	315.7	–
Parakeifferiella cf. *gracillima*	35.7	73.3	0.5	65.5	0.3	44.7	32.5	7.9	114.3	63.0	11.4	14.7	–	235.1	–
Parametriocnemus lundbecki	69.3	95.9	0.7	100.1	0.5	67.6	60.0	17.7	105.3	71.8	35.8	25.7	–	515.7	63.4
Psectrocladius (s.s.) limbatellus	91.2	0.0		179.3	0.5	92.1	81.5	27.4	–	–	–	–	–	–	–
Rheocricotopus (Psil.) chalybeatus group	41.9	57.3	0.7	57.1	0.6	37.6	47.4	6.8	–	–	–	–	–	–	–
Stictocladius sp. G	44.3	54.7	0.8	78.6	0.6	47.4	–	–	144.9	31.0	15.1	11.2	–	237.4	–
Thienemanniella xena	34.1	43.7	0.8	63.9	1.4	28.4	–	–	138.3	55.9	11.7	14.2	–	263.9	–
Tvetenia paucunca	51.6	74.3	0.7	86.9	0.5	47.9	38.0	4.6	213.6	141.9	33.9	21.2	185.3	565.7	–
Tvetenia tshernovskii	74.3	102.1	0.7	98.6	0.5	64.5	51.0	9.8	150.3	131.4	37.1	28.3	104.6	606.0	–

To be continued on next page

Table 1. Continued from previous page.

B)	Mentum L	Mentum W	Mentum L/W	Mandibles L	A_1/ Mandible L	Premandible L	VmP L	VmP W	Posterior parapod L	Posterior parapod W	Procercus L	Procercus W	Longest body setae	Apical setae L	Sub-apical setae
Subfamily Chironominae															
Beckidia tethys	42.0	58.2	0.7	67.3	0.6	49.4	30.3	40.0	159.0	45.1	–	–	–		
Chernovskiia orbicus	20.5	48.8	0.4	61.7	1.5	47.3	19.4	28.0	220.7	62.5	8.1	9.7	–	125.1	–
***Chironomus (s.s.) decorus* group**	111.4	180.4	0.6	188.8	0.5	135.8	85.2	179.6	734.4	475.9	38.8	29.2	–	552.6	–
***Chironomus (s.s.) salinarius* group**	111.8	192.7	0.6	205.7	0.5	218.1	99.9	206.1	212.7	117.6	21.2	30.6	–	282.8	–
Cryptochironomus blarina	71.3	131.5	0.5	144.8	0.4	121.2	63.3	242.1	269.7	206.6	34.2	35.7	–	610.7	–
Demicryptochironomus cuneatus	36.5	70.7	0.5	59.1	0.9	83.8	26.9	101.5	248.3	108.5	27.9	31.6	–	787.1	–
***Glyptotendipes (Glyptotendipes)* sp.**	37.7	67.1	0.6	75.8	0.4	51.8	35.0	67.8	136.4	78.4	12.6	18.0	–	357.5	–
***Microtendipes (s.s.) pedellus* group**	100.6	153.5	0.7	150.8	0.6	95.9	77.0	135.2	91.1	115.1	30.4	40.5	–	512.8	–
***Microtendipes (s.s.) rydalensis* group**	42.9	73.9	0.6	78.7	0.6	41.7	27.7	59.9	80.6	73.7	11.1	13.7	–	295.0	–
Paracladopelma* cf. *rolli	38.6	91.8	0.4	87.3	0.9	65.5	42.6	82.4	358.6	82.5	40.9	29.2	–	722.9	–
Paracladopelma nereis	44.1	107.1	0.4	101.1	0.4	62.8	38.1	84.6	275.9	106.1	25.9	10.9	–	420.9	–
Paralauterborniella nigrohalteralis	29.9	43.6	0.7	50.1	0.4	34.6	20.4	66.1	51.5	30.1	6.9	6.9	–	325.1	–
Paratendipes* cf. *basidens	42.0	76.8	0.5	85.3	0.5	55.3	39.9	126.6	93.6	78.1	13.0	15.7	–	354.5	–
***Phaenopsectra punctipes* group**	39.6	66.5	0.6	82.5	0.3	41.6	24.5	63.3	88.3	70.0	14.1	12.1	–	451.7	–
***Polypedilum (s.s.) fallax* group**	94.8	153.8	0.6	167.0	0.4	99.5	55.8	159.2	165.9	141.1	30.5	26.7	–	328.7	–
***Polypedilum (s.s.)laetum* group**	63.2	106.3	0.6	110.7	0.5	70.7	43.7	105.6	145.2	21.1	25.6	23.0	–	563.2	–
***Polypedilum (Tripodura) scalaenum* group**	44.3	63.6	0.7	78.8	0.5	48.1	36.9	84.6	66.8	16.0	14.0	12.8	–	466.0	–
Polypedilum (Uresipedilum) flavum	55.4	116.6	0.5	138.3	0.4	85.6	47.1	86.1	258.8	125.7	20.9	22.2	–	461.3	
Robackia claviger	45.2	41.6	1.1	89.2	0.6	58.0	30.5	35.1	216.3	37.8	–	–	–	–	–
Robackia demeijerei	31.3	36.7	0.9	54.2	0.7	48.9	31.5	38.5	173.0	27.4	6.1	9.3	–	268.7	–
***Stenochironomus (s.s.)* sp.**	120.5	153.7	0.8	180.6	0.4	74.8	64.0	83.6	110.2	84.3	–	–	–	215.8	–
***Stictochironomus* sp.**	68.2	115.4	0.6	102.3	0.6	92.8	138.0	57.0	112.1	173.3	27.0	24.6	–	388.1	111.5
***Cladotanytarsus* sp.**	39.1	59.8	0.7	84.7	0.6	57.0	20.1	71.7	68.1	92.4	7.3	20.6	–	105.3	–
Micropsectra polita	78.2	129.3	0.6	173.6	1.3	98.9	31.2	138.1	125.7	194.0	44.5	40.7	220.0	681.1	177.0
Neostempellina reissi	28.8	75.7	0.4	79.5	0.5	52.6	26.4	55.5	–	–	116.9	65.7	215.9	–	–
***Paratanytarsus* sp.**	50.1	66.1	0.8	109.3	0.6	55.6	19.1	77.9	70.0	126.1	15.8	10.7	–	460.9	
***Rheotanytarsus* sp. 1**	25.2	69.2	0.4	78.5	0.8	41.3	16.1	49.6	69.0	56.4	13.5	8.9	104.4	258.6	–
***Rheotanystarsus* sp. 2**	49.2	75.1	0.7	94.6	0.9	53.9	21.7	69.7	118.6	119.4	13.7	22.8	157.7	473.0	–
***Stempellina* sp.**	27.0	73.7	0.4	98.4	0.6	53.4	57.4	27.8	44.0	41.8	35.8	28.6	–	–	–
***Stempellinella* sp.**	25.0	66.4	0.4	77.2	0.5	43.4	23.4	53.0	70.0	97.8	11.0	16.0	–	341.0	69.1
***Tanytarsus chinyensis* group**	37.6	68.0	0.6	98.4	1.2	44.4	74.8	19.7	145.8	71.6	28.2	26.3	–	135.6	54.2

C)	MP	A_1/MP	MP W	MP_1/W at RO	Ligula L	Ligula W_{base}	Ligula W_{tip}	Paraligula L
Subfamily Tanypodinae								
***Ablabesmyia (s.s.)* sp.**	58.6	4.0	–	–	62.7	41.0	48.7	26.9
Meropelopia americana	80.8	5.4	24.9	16.3	136.9	57.5	62.4	57.3
Meropelopia flavifrons	51.3	5.5	17.7	14.5	98.6	47.1	50.3	43.2
Nilotanypus fimbriatus	30.9	4.9	21.3	15.4	99.4	48.5	53.8	42.4
***Rheopelopia acra* group**	27.6	5.7	12.1	10.2	58.1	22.1	26.6	25.7
***Procladius (Holotanypus)* sp.**	44.7	2.5	–	–	92.6	40.6	63.1	41.6
Subfamily Chironominae *Beckidia tethys*	195.8	158.5	–	–	–	–	–	–
Polypedilum (Uresipedilum) flavum	118.2	218.9	–	–	–	–	–	–
Robackia demeijerei	94.4	0.4	176.7	–	–	–	–	–

A, measurements of larva, head and antenna; B, measurements of head and abdominal parts; C, measurements and ratio of Tanypodinae and some Chironominae species maxillary palp, and ligula/paraligula of Tanypodinae.

Table 2. Various environmental responses, tolerance indices, larval habitat and niche (A), and larval morphological traits (B) of Chironomidae collected in lower Athabasca River and its tributaries.

Preference	Preference	Preference	Preference
Acidobiontic=pH<5.5	Saproxenous=Usually in clean water	Eurythermal=Waters>15°C	Epibenthic=On and not in substrate
Acidophlous=pH<7	Saprophobic=No pollution	Eulichotophlous=Low turbidity	Embenthic=In substrates
Neutral=pH=7	Euoxylophilous=High Oxygen content	Mesolichtophilous=Moderate turbidity	Epipelic=On mudd
Alkaliphlous=pH>7	Mesoxylophlous=Moderate Oxygen content	Polylichtophlous=Wide range of turbidity	Episabulic=On sand
Alkalibiontic=pH>8.5	Oligoxylphlous=Low Oxygen content	Oligolichtophlous=High turbidity	Epilithic=On rock
Eutrophic=High nutrient	Anoxyphlous=Facultative anaerobic	Limnobiontic=Only standing waters	Epixylous=On or in wood
Mesotrophic=Moderate nutrient	Euthermal=Warm waters >30°C	Limnophilous=Prefer standing but also in running	Epiphytic=On or in plants
Oligotrophic=Low nutrient	Mesothermal=15°C<Waters<30°C	Indifferent=No preference	Attached=Sessile
Dystrophic=Rich in Humic	Oligothermal=0°C<Cold waters<15°C	Rheophilous=Prefer running but also in standing	Unattached=Free-living
Saprophilic=Polluted waters	Stenothermal=Waters<5°C	Lenthic=Lakes, ponds, pools, marsh, seepage	
Facultative=Wide range	Metathermal=5°C<Waters<15°C	Lotic=Rivers, streams, creeks, springs	
Shape	**Shape**	**Shape**	**Shape**
A=Absent	EDV=Expanded dorso-ventrally	P=Present	SP=Simple
ARC=Arched	FL=Flat	R=Reduced	SR=Serrated
CL=Cylindrical	L=Large	RD=Round	TU=Tubular
CLS=Clustered	LG=Long	RT=Retractile	WS=Wedge Shaped
CP=Compressed	NA=Narrow Anteriorly	S=Small	
D=Developed	NR=Non-retractile	SH=Short	
EA=Expanded Anteriorly	OP=On Pedicels	SL=Slender	

A)	Tribe/ Group	PTI Lentic	PTI Lotic	pH	Nutrient	Organic	Oxygen
Subfamily Tanypodinae							
***Ablabesmyia (s.s.)* sp.**	Pentaneurini	8.0	4.7	Indifferent	Mesotrophic	Saproxenous	Mesoxyphilous
Meropelopia americana	Pentaneurini	6.0	5.3	Acidobiontic	Mesotrophic	Saprophobic	Mesoxyphilous
Meropelopia flavifrons	Pentaneurini	6.0	5.7	Alkaliphilous	Mesotrophic	Saprophobic	Mesoxyphilous
Nilotanypus fimbriatus	Pentaneurini	8.0	5.0	Acidobiontic	Oligo-Mesotrophic	Saprophobic	Mesoxyphilous
***Rheopelopia acra* group**	Pentaneurini	4.0	5.3	Acidobiontic	–	–	Mesoxyphilous
Thienemannimyia senata	Pentaneurini	6.0	5.2	Acidophilous	Dystro-Mesotrophic	Saprophobic	Euoxyphilous
***Procladius (Holotanypus)* sp.**	Procladini	9.0	6.3	Acidobiontic	Meso-Eutrophic	Saproxenous	Oligo-Mesoxyphilous
Subfamily Diamesinae							
***Diamesa* sp.**	Diamesini	5.0	3.7	–	Mesotrophic	Saprophobic	Mesoxyphilous
Pagastia orthogonia	Diamesini	1.0	1.8	–	Mesotrophic	Saprophobic	Mesoxyphilous
***Potthastia gaedi* group**	Diamesini	2.0	4.7	Indifferent	Dystro-Mesotrophic	Saprophobic	Mesoxyphilous
***Potthastia longimanus* group**	Diamesini	2.0	4.7	Indifferent	Dystro-Mesotrophic	Saprophobic	Mesoxyphilous
Subfamily Prodiamesinae							
***Monodiamesa* sp.**	–	7.0	–	–	Oligotrophic	Saprophobic	Oligoxylo-Mesoxyphilous
Subfamily Orthocladiinae							
Brillia flavifrons	*Brillia* group	5.0	3.3	–	Mesotrophic	–	Oligoxyphilous
Brillia parva	*Brillia* group	5.0	2.5	Indifferent	Oligotrophic	Saprophobic	Mesoxyphilous
Cardiocladius* cf. *albiplumus	Metriocnemini	5.0	5.6	–	Meso-Eutrophic	Facultative	Mesoxyphilous
***Corynoneura* sp.**	Corynoneurini	4.0	6.7	Acidophilous	Mesotrophic	–	Mesoxyphilous
Cricotopus (s.s.)* cf. *albiforceps	Orthocladiini	7.0	6.3	Acidophilous	Meso-Eutrophic	Facultative	Oligo-Mesoxyphilous

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Table 2. Continued from previous page.

A)	Tribe/ Group	PTI Lentic	PTI Lotic	pH	Nutrient	Organic	Oxygen
Subfamily Orthocladiinae							
Cricotopus mackenziensis	Orthocladiini	–	–	Acidophilous	Meso-Eutrophic	Facultative	Oligo-Mesoxyphilous
***Cricotopus (s.s.) tremulus* group**	Orthocladiini	7.0	6.0	Acidophilous	Meso-Eutrophic	Facultative	Mesoxyphilous
Cricotopus (s.s.) trifascia	Orthocladiini	6.0	6.0	Acidophilous	Meso-Eutrophic	Facultative	Mesoxyphilous
Cricotopus (Nostocladius) nostocicola	Orthocladiini	7.0	–	Acidophilous	Meso-Eutrophic	Facultative	–
***Doncricotopus* sp.**	Orthocladiini	–	4.8	–	–	–	–
***Epoicocladius* sp. #3**	Orthocladiini	4.0	2.7	–	–	–	–
***Eukiefferiella gracei* group**	Metriocnemini	4.0	4.5	–	Oligo-Mesotrophic	–	Meso-Euxyphilous
Euryhapsis cilium	*Brillia* group	–	5.0	–	–	–	–
***Heterotrissocladius marcidus* group**	Orthocladiini	4.0	4.0	Acidophilous	Dystro-Mesotrophic	Saprophobic	Mesoxyphilous
***Hydrosmittia* sp.**	Metriocnemini	–	–	–	–	–	–
***Krenosmittia* sp.**	Metriocnemini	1.0	5.3	Acidophilous	Dystro-Mesotrophic	Saprophobic	Mesoxyphilous
Lopescladius (Cordiella)* cf. *hyporheicus	*Stictocladius* group		4.0	5.7	–	–	– –
***Nanocladius (s.s.) dichromus* group**	Orthocladiini	7.0	3.3	–	–	–	–
Orthocladius (Eud.) dubitatus	Orthocladiini	6.0	5.0	–	–	–	–
Orthocladius (Euo.) rivicola	Orthocladiini	6.0	5.0	–	–	–	–
Orthocladius (s.s.)* cf. *clarkei	Orthocladiini	–	–	–	–	–	–
Orthocladius (s.s.) obumbratus	Orthocladiini	6.0	5.0	Indifferent	Oligo-Euthrophic	Facultative	Mesoxyphilous
***Paracricotopus* sp.**	Metriocnemini	4.0	5.3	–	–	–	–
***Parakeifferiella* sp.**	Metriocnemini	4.0	4.7	Alkaliphilous	Mesotrophic	–	–
Parametriocnemus lundbeckii	Metriocnemini	5.0	3.7	Indifferent	Dystro-Mesotrophic	Saprophobic	Mesoxy-Euoxyphilous
Psectrocladius (s.s.) limbatellus	Orthocladiini	8.0	5.7	Alkaliphilous	Mesotrophic	Facultative	Mesoxyphilous
***R. (P.) chalybeatus* group**	Orthocladiini	6.0	–	–	–	–	Mesoxyphilous
***Stictocladius* sp. G**	*Stictocladius* group		–	–	–	–	– –
Thienemanniella xena	Corynoneurini	6.0	5.5	Indifferent	Meso-Eutrophic	Saprophobic	Mesoxyphilous
Tvetenia paucunca	Metriocnemini	4.0	5.8	–	Meso-Eutrophic	Facultative-Saprophilic	Oligoxy-Mesoxyphilous
Tvetenia tshernovskii	Metriocnemini	5.0	–	–	Meso-Eutrophic	Facultative-Saprophilic	Oligoxy-Mesoxyphilous
Subfamily Chironominae							
Beckidia tethys	Chironomini	–	–	–	–	–	–
Chernovskiia orbicus	Chironomini	–	–	–	–	–	–
***Chironomus (s.s.) decorus* group**	Chironomini	10.0	8.3	Acidophilous	–	–	–
***Chironomus (s.s.) slainarius* group**	Chironomini	10.0	8.3	Acidophilous	–	–	–
Cryptochironomus blarina	Chironomini	8.0	6.0	Alkaliphilous	Meso-Eutrophic	Saproxenous	Oligoxy-Mesoxyphilous
Demicryptochironomus cuneatus	Chironomini	8.0	4.3	–	–	–	–
***Glyptotendipes (s.s.)* sp.**	Chironomini	10.0	6.7	Alkaliphilous	Meso-Eutrophic	Facultative	Oligoxy-Mesoxyphilous
***Microtendipes (s.s.) pedellus* group**	Chironomini	6.0	5.3	Alkaliphilous	Meso-Eutrophic	Facultative	Mesophilous
***Microtendipes (s.s.) rydalensis* group**	Chironomini	4.0	5.3	Alkaliphilous	Meso-Eutrophic	Facultative	Mesophilous
Paracladopelma* cf. *rolli	Chironomini	–	–	–	Meso-Oligotrophic	–	–
Paracladopelma nereis	Chironomini	7.0	6.0	–	Meso-Oligotrophic	–	–
Paralauterborniella nigrohalteralis	Chironomini	8.0	5.3	Indifferent	Dystro-Eutrophic	Saproxemous	Mesophilous
Paratendipes* cf. *basidens	Chironomini	6.0	4.4	–	–	–	–

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Table 2. Continued from previous page.

A)	Tribe/ Group	PTI Lentic	PTI Lotic	pH	Nutrient	Organic	Oxygen
Subfamily Chironominae							
***Phaenopsectra punctipes* group**	Chironomini	7.0	5.0	Indifferent	Dystro-Euthrophic	Sproxenous	Mesophilous
***Polypedilum (s.s.) fallax* group**	Chironomini	6.0	6.3	Indifferent	Dystro-Euthrophic	Sproxenous	Mesophilous
***Polypedilum (s.s.) laetum* group**	Chironomini	6.0	4.3	–			
***Polypedilum (T.) scalaenum* group**	Chironomini	6.0	–	Alkaliphilous	Oligo-Mesotrophic	Saprophobic	Oligoxy-Mesoxyphilous
Polypedilum (U.) flavum	Chironomini	6.0					
Robackia claviger	Chironomini	4.0	4.7	–	–	–	–
Robackia demeijerei	Chironomini	–	4.3	–	–	–	–
***Stenochironomus (s.s.)* sp.**	Chironomini	5.0	4.0	–	–	–	–
***Stictochironomus* sp.**	Chironomini	9.0	4.7	–	Meso-Oligotrophic	–	–
***Cladotanytarsus* sp.**	Tanytarsini	5.0	5.5	Acidophilous	Dystro-Eutrophic	Facultative	Meso-Euxyphilous
Micropsectra polita	Tanytarsini	7.0	5.0	Alkaliphilous	Oligotrophic	Saprophobic	Mesophilous
Neostempellina reissi	Tanytarsini	–	–	–	–	–	–
***Paratanytarsus* sp.**	Tanytarsini	6.0	5.0	–	Meso-Eutrophic	–	–
***Rheotanytarsus* sp.**	Tanytarsini	6.0	4.0	–	–	–	–
***Stempellina* sp.**	Tanytarsini	2.0	3.3	Indifferent	Dytro-Eutrophic	Saprophobic	Mesoxyphilous
***Stempellinella* sp.**	Tanytarsini	4.0	4.7	–	Meso-Oligotrophic	–	Meso-Euxyphilous
***Tanytarsus chinyensis* group**	Tanytarsini	6.0	6.0	–	Meso-Eutrophic	–	–

A)	Temperature	Turbidity	Current	General Habitat	Specific Habitat	Adult Emergence	FFG
Subfamily Tanypodinae							
***Ablabesmyia (s.s.)* sp.**	Meta-Mesothermal	Polylichtophilous	Rheophilous	Lotic/Lentic	Epiphytic	Autumn-Summer	Predator
Meropelopia americana	Oligo-Mesothermal	Mesolichtophilous	Rheophilous	Lotic	Epiphytic	Autumn-Winter	Predator
Meropelopia flavifrons	Oligo-Mesothermal	Mesolichtophilous	Rheobiontic	Lotic	Epiphytic	Autumn-Winter	Predator
Nilotanypus fimbriatus	Oligo-Mesothermal	Mesolichtophilous	Rheophilous	Lotic	Episabulic	Summer-Autumn	Predator
***Rheopelopia acra* group**	Oligo-Mesothermal	–	Rheophilous	Lotic	–	Summer	Predator
Thienemannimyia senata	Meta-Oligothermal	Eulichotophilous	Rheobiontic	Lotic	Unattached/Epiphytic	Summer-Winter	Predator
***Procladius (Holotanypus)* sp.**	Mesothermal	Polylichtophilous	Limnophilous	Lotic/Lentic	Epipelic	Summer–Winter	Predator
Subfamily Diamesinae							
***Diamesa* sp.**	Meta-Stenothermal	Polylichtophilous	Rheobiontic	Lotic	Unattached/Epilithic	Winter-Spring	Collector-gatherer
Pagastia orthogonia	Steneothermal	Polylichtophilous	Rheobiontic	Lotic	Unattached/Epilithic	Winter-Spring	Collector-gatherer
***Potthastia gaedi* group**	Eurythermic	Polylichtophilous	Rheobiontic	Lotic	Unattached/Epilithic	Winter-Spring	Collector-gatherer
***Potthastia longimanus* group**	Eurythermic	Polylichtophilous	Rheobiontic	Lotic	Unattached/Epilithic	Winter-Spring	Collector-gatherer
Subfamily Prodiamesinae							
***Monodiamesa* sp.**	Oligo-Mesothermal	–	Limnophilous	Lentic	Episabulic/Epibenthic	Summer	Collector-gatherer
Subfamily Orthocladiinae							
Brillia flavifrons	Oligothermal	–	Limnobiontic	Lentic	Epixylous	Winter	Shredder
Brillia parva	Mesothermal	Eulichotophilous	Rheophilous	Lotic	Unattached/Epixylous	Spring	Shredder
Cardiocladius* cf. *albiplumus	Oligothermal	–	Rheobiontic	Lotic	Epiphytic/Epizooic	Spring-Autumn	Collector-gatherer
***Corynoneura* sp.**	Mesothermal	–	Indifferent	Lotic/Lentic	Epibenthic	Spring-Autumn	Collector-gatherer
Cricotopus (s.s.)* cf. *albiforceps	Mesothermal	–	Rheophilous	Lotic	Episabulic/Epipelic	Autumn-Summer	Shredder
Cricotopus mackenziensis	Mesothermal	–	Rheophilous	Lotic	Epiphytic	Summer-Autumn	Scraper
***Cricotopus (s.s.) tremulus* group**	Mesothermal	–	Rheophilous	Lotic	Epiphytic	–	Shredder
Cricotopus (s.s.) trifascia	Oligothermal	–	Rheophilous	Lotic/Lentic	Epiphytic	–	Shredder

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Table 2. Continued from previous page.

A)	Temperature	Turbidity	Current	General Habitat	Specific Habitat	Adult Emergence	FFG
Subfamily Orthocladiinae							
Cricotopus (Nostocladius) nostocicola	–	–	Rheophilous	Lotic/Lentic	Epiphytic	Winter-Spring	Shredder
***Doncricotopus* sp.**	–	–	–	Lotic	–	Summer	–
***Epoicocladius* sp. #3**	–	–	Rheophilous	Lotic	Epizooic	–	Collector-gatherer
***Eukiefferiella gracei* group**	Steneno-Mesothermal	–	Rheobiontic	Lotic	Epiphytic	–	Collector-gatherer
Euryhapsis cilium	Steno-Mesothermal	–	Rheobiontic	Lotic	–	–	Shredder
***Heterotrissocladius marcidus* group**	Steneothermal	Mesolichtophilous	Rheobiontic	Lotic/Lentic	Epixylous	Autumn-Summer	Collector-gathere
***Hydrosmittia* sp.**	Steneothermal	–	Rheophilous	Lotic/Lentic	Epiphytic	–	Collector-gatherer
***Krenosmittia* sp.**	Oligothermal	Eulichotophilous	Rheobiontic	Lotic	Unattached/Epiphytic/Embenthic	Summer-Autumn	Collector-gatherer
Lopescladius (Cor.)* cf. *hyporheicus	–	–	Rheobiontic	Lotic	Episabulic/Epipelic/Embenthic	Summer	Collector-gatherer
***Nanocladius (s.s) dichromus* group**	Oligothermal	–	Rheophilous	Lotic/Lentic	Epizooic/Unattached	–	Collector-gatherer
Orthocladius (Eud.) dubitatus	–	–	Rheophilous	Lotic/Lentic	Epiphytic/Eplithic	–	Collector-gatherer
Orthocladius (Euo.) rivicola	Eurythermal	–	Rheobiontic	Lotic	–	–	Collector-gatherer
Orthocladius (s.s.)* cf. *clarkei						–	Collector-gatherer
Orthocladius (s.s.) obumbratus	Eury-Mesothermal	Meso-Eulichtophilous	Rheophilous	Lotic	Epilithic	Autumn-Winter	Collector-gatherer
***Paracricotopus* sp.**	–	–	Rheophilous	Lotic/Lentic	–	–	Collector-gatherer
***Parakeifferiella* sp.**	Mesothermal	–	Limnophilous	Lentic	–	–	Collector-gatherer
Parametriocnemus lundbeckii	Eury-Mesothermal	Polylichtophilous	Rheobiontic	Lotic/Lentic	Unattached/Epibenthic	Summer-Winter	Collector-gatherer
Psectrocladius (s.s.) limbatellus	Mesothermal	–	Indifferent	Lotic/Lentic	Epiphytic	Autumn	Collector-gatherer
***R. (P.) chalybeatus* group**	Mesothermal	Mesolichtophilous	Rheophilous	Lotic	Epiphytic/Epilithic/Epibenthic	–	Collector-gatherer
***Stictocladius* sp. G**	–	–	Rheobiontic	Lotic	–	–	Collector-gatherer
Thienemanniella xena	Mesothermal	Eulichotophilous	Rheobiontic	Lotic	Epiphytic/Epilithic	Autumn-Summer	Collector-gatherer
Tvetenia paucunca	Mesothermal	–	Rheophilous	Lotic	–	–	Collector-gatherer
Tvetenia tshernovskii	Mesothermal	–	Rheophilous	Lotic	–	–	Collector-gatherer
Subfamily Chironominae							
Beckidia tethys	Mesothermal	–	Rheobiontic	Lotic/Lentic	Episabulic	–	Collector-gatherer
Chernovskiia orbicus	–	–	Rheophilous	Lotic	Episabulic	–	Collector-gatherer
***Chironomus (s.s.) decorus* group**	Mesothermal	–	Limnophilous	Lentic	–	–	Collector-gatherer
***Chironomus (s.s.) slainarius* group**	Mesothermal	–	Limnophilous	Lentic	–	–	Collector-gatherer
Cryptochironomus blarina	Meta-Eurythermal	Mesolichtophilous	Indifferent	Lotic/Lentic	Unattached	Autumn-Summer	Predator
Demicryptochironomus cuneatus	–	–	Indifferent	Lotic/Lentic	Epiphytic/Epilithic	–	Predator
***Glyptotendipes (s.s.)* sp.**	Mesothermal	Polylichtophilous	Limnophilous	Lotic/Lentic	Epiphytic/Epixylous	–	Shredder
***Microtendipes (s.s.) pedellus* group**	Mesothermal	Mesolichtophilous	Rheobiontic	Lotic	Unattached	Summer-Winter	Collector-filterer
***Microtendipes (s.s.) rydalensis* group**	Mesothermal	Mesolichtophilous	Rheobiontic	Lotic	Unattached	–	Collector-filterer
Paracladopelma* cf. *rolli	–	–	Rheophilous	Lotic/Lentic	Episabulic	–	Collector-filterer
Paracladopelma nereis	–	–	Rheophilous	Lotic/Lentic	Episabulic	–	Collector-gatherer
Paralauterborniella nigrohalteralis	Eurythermal	Mesolichtophilous	Rheophilous	Lotic	Epibenthic	Autumn-Summer	Collector-gatherer
Paratendipes* cf. *basidens	–	–	Limnophilous	Lotic/Lentic	Episabulic/Epipelic	–	Collector-gatherer
***Phaenopsectra punctipes* group**	Metathermal	Mesolichtophilous	Rheobiontic	Lotic	Unattached/Episabulic	Autumn-Summer	Scraper

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Table 2. Continued from previous page.

A)	Temperature	Turbidity	Current	General Habitat	Specific Habitat	Adult Emergence	FFG
Subfamily Chironominae							
***Polypedilum (s.s.) fallax* group**	Metathermal	Polylichtophilous	Indifferent	Lotic/Lentic	Epiphytic/Epixylous/Epibenthic	Autumn-Summer	Shredder
***Polypedilum (s.s.) laetum* group**	Mesothermal		Indifferent	Lotic/Lentic	Epiphytic/Epixylous/Epibenthic		Shredder
***Polypedilum (T.) scalaenum* group**	Meta-Mesothermal		Indifferent	Lotic/Lentic	Epiphytic/Epixylous/Epibenthic/Episabulic	Spring-Summer	Shredder
Polypedilum (U.) flavum		–	Indifferent	Lotic/Lentic	Epiphytic/Epixylous/Epibenthic		Shredder
Robackia claviger	Mesothermal	–	Rheophilous	Lotic	Episabulic	–	Collector-gatherer
Robackia demeijerei	Mesothermal	–	Rheophilous	Lotic	Episabulic	–	Collector-gatherer
***Stenochironomus (s.s.)* sp.**	–	–	Limnophilous	Lentic	Epiphytic	–	Collector-gatherer
***Stictochironomus* sp.**	–	–	Limnophilous	Lentic	Epiphytic/Epilithic/Epibenthic	–	Collector-gatherer
***Cladotanytarsus* sp.**	Eury-Metathermal	Mesolichtophilous	Indifferent	Lotic/Lentic	Epiphytic/Attached	Autumn-Summer	Collector-filterer
Micropsectra polita	Metathermal		Rheobiontic	Lotic	Epibenthic/Attached	Spring	Collector-filterer
Neostempellina reissi	–	–	Rheobiontic	Lotic	–	–	Collector-filterer
***Paratanytarsus* sp.**	Mesothermal	–	Indifferent	Lotic/Lentic	–	–	Collector-filterer
***Rheotanytarsus* sp.**	Mesothermal	–	Rheobiontic	lotic	Epibenthic/Attached	–	Collector-filterer
***Stempellina* sp.**	Metathermal	Meso-Eulilichtophilous	Rheobiontic	Lotic	Epiphytic-Epibenthic	Winter-Spring	Collector-gatherer
***Stempellinella* sp.**	Stenothermal	–	Rheophilous	Lotic/Lentic	Episabulic	Summer-Autumn	Collector-gatherer
***Tanytarsus chinyensis* group**	Mesothermal	–	Indifferent	Lotic/Lentic	Epiphytic/Episabulic/Epibenthic/Epipelic/Attached	–	Collector-filterer

B)	Head Capsule Shape	Antennae Development	Lauterborn Organs Development	Mandible's Inner Teeth	Body Shape	Anterior Parapods Development	Posterior Parapods Development	Posterior Parapods Shape	Claws of Posterior Parapods	Claws Shape
Subfamily Tanypodinae										
***Ablabesmyia (s.s.)* sp.**	NA	RT/D	A	R	CL	D	D	LG	RT	L/LG/SP/CLS
Meropelopia americana	NA	RT/D	A	R	CL	D	D	LG	RT	L/LG/SP/CLS
Meropelopia flavifrons	NA	RT/D	A	R	CL	D	D	LG	RT	L/LG/SP/CLS
Nilotanypus fimbriatus	NA	RT/D	A	R	CL	D	D	LG	RT	L/LG/SR/CLS
***Rheopelopia acra* group**	NA	RT/D	A	R	CL	D	D	LG	RT	L/LG/SP/CLS
Thienemannimyia senata	NA	RT/D	A	R	CL	D	D	LG	RT	L/LG/SP/CLS
***Procladius (Holotanypus)* sp.**	NA	RT/D	A	R	EDV	D	D	LG	RT	L/LG/SP/CLS
Subfamily Diamesinae										
***Diamesa* sp.**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Pagastia orthogonia	NA	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
***Potthastia gaedi* group**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
***Potthastia longimanus* group**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Subfamily Prodiamesinae										
***Monodiamesa* sp.**	CP	NR/D	A	D	CL	R	D	SH	RT	LG/SP/CLS
Subfamily Orthocladiinae										
Brillia flavifrons	TU	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Brillia parva	TU	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Cardiocladius* cf. *albiplumus	CP	NR/D	P/D	D	CL	R	D	SH	RT	LG/SP/CLS
***Corynoneura* sp.**	TU	NR/D	A/R	D	CL	D	D	LG	RT	LG/SP/CLS
Cricotopus (s.s.)* cf. *albiforceps	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Cricotopus mackenziensis	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS

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Table 2. Continued from previous page.

B)	Head Capsule Shape	Antennae Development	Lauterborn Organs Development	Mandible's Inner Teeth	Body Shape	Anterior Parapods Development	Posterior Parapods Development	Posterior Parapods Shape	Claws of Posterior Parapods	Claws Shape
Subfamily Orthocladiinae										
***Cricotopus (s.s.) tremulus* group**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Cricotopus (s.s.) trifascia	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Cricotopus (Nostocladius) nostocicola	CP	NR/D	P/R	D	CL/CP	D	D	SH	RT	LG/SP/CLS
***Doncricotopus* sp.**	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Epoicocladius* sp. #3**	CP	NR/D	A	D	CL	D	D	SH	RT	LG/SP/CLS
***Eukiefferiella gracei* group**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Euryhapsis cilium	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
***Heterotrissocladius marcidus* group**	CP	NR/D	A	D	CL	D	D	SH	RT	LG/SP/CLS
***Hydrosmittia* sp.**	CP	NR/D	A	D	CL	R	R	SH	RT	LG/SP/CLS
***Krenosmittia* sp.**	TU	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Lopescladius (Cordiella)* cf. *hyporheicus	TU	NR/D	P/R	D	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
***Nanocladius (s.s.) dichromus* group**	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Orthocladius (Eud.) dubitatus	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Orthocladius (Euo.) rivicola	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Orthocladius (s.s.)* cf. *clarkei	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Orthocladius (s.s.) obumbratus	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
***Paracricotopus* sp.**	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Parakeifferiella* sp.**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Parametriocnemus lundbeckii	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Psectrocladius (s.s.) limbatellus	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
***Rheocricotopus (Psil.) chalybeatus* group**	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
***Stictocladius* sp. G**	TU	NR/D	P/D	D	CL/SL	D	D	SH	RT	LG/SP/CLS
Thienemanniella xena	TU	NR/D	P/R	D	CL	D	D	LG	RT	LG/SP/CLS
Tvetenia paucunca	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Tvetenia tshernovskii	CP	NR/D	P/R	D	CL	D	D	SH	RT	LG/SP/CLS
Subfamily Chironominae										
Beckidia tethys	TU	NR/D	A	D	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
Chernovskiia orbicus	TU	NR/D	A	R	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
***Chironomus (s.s.) decorus* group**	WS	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Chironomus (s.s.) slainarius* group**	WS	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Cryptochironomus blarina	NA	NR/D	A	D	CL/SL	D	D	SH	RT	LG/SP/CLS
Demicryptochironomus cuneatus	NA	NR/D	A	D	CL	D	D	SH	RT	LG/SP/CLS
***Glyptotendipes (Glyptotendipes)* sp.**	EA	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Microtendipes (s.s.) pedellus* group**	EA	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Microtendipes (s.s.) rydalensis* group**	EA	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Paracladopelma* cf. *rolli	TU	NR/D	A	D	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
Paracladopelma nereis	WS	NR/D	A	D	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
Paralauterborniella nigrohalteralis	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Paratendipes* cf. *basidens	EA	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Phaenopsectra punctipes* group**	TU	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Polypedilum (s.s.) fallax* group**	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Polypedilum (s.s.) laetum* group**	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS

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Table 2. Continued from previous page.

B)	Head Capsule Shape	Antennae Development	Lauterborn Organs Development	Mandible's Inner Teeth	Body Shape	Anterior Parapods Development	Posterior Parapods Development	Posterior Parapods Shape	Claws of Posterior Parapods	Claws Shape
Subfamily Chironominae										
***Polypedilum (Tripodura) scalaenum* group**	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Polypedilum (Uresipedilum) flavum	CP	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
Robackia claviger	TU	NR/D	A	D	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
Robackia demeijerei	TU	NR/D	A	D	CL/SL	D	D	LG/SL	RT	LG/SP/CLS
***Stenochironomus (s.s.)* sp.**	EA	NR/D	P/R	D	EA	R	R	SH	RT	LG/SP/CLS
***Stictochironomus* sp.**	WS	NR/D	P/D	D	CL	D	D	SH	RT	LG/SP/CLS
***Cladotanytarsus* sp.**	CP	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SR/ARC
Micropsectra polita	CP	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SP/ARCH
Neostempellina reissi	RD	NR/D	P/D/OP	D	EA	D	D	SH	NR	S/SH/SP/ARCH
***Paratanytarsus* sp.**	CP	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SP/ARCH
***Rheotanytarsus* sp.**	CP	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SP/ARCH
***Stempellina* sp.**	RD	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SP/ARCH
***Stempellinella* sp.**	CP	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SP/ARCH
***Tanytarsus chinyensis* group**	CP	NR/D	P/D/OP	D	CL	D	D	SH	NR	S/SH/SP/ARCH

PTI, pollution tolerance index.

Table 3. Taxonomy and ecology bibliography of Chironomidae species collected in lower Athabasca River and its tributaries.

	Taxonomy	Ecology
Subfamily Tanypodinae		
***Ablabesmyia (s.s.)* sp.**	Roback (1985)	Bass (1986); Cloutier and Harper (1978); Roback (1985)
Meropelopia americana	Roback (1981)	Blackwood *et al.* (1995); Ferrington *et al.* (1985); Hudson *et al.* (1990), McShaffrey and Olive (1985); Rempel and Harrison (1987); Roback (1981)
Meropelopia flavifrons	Roback (1981)	Blackwood *et al.* (1995); Ferrington *et al.* (1985); Hudson *et al.* (1990), McShaffrey and Olive (1985); Rempel and Harrison (1987); Roback (1981)
Nilotanypus fimbriatus	Roback (1986)	Bass (1986); Cloutier and Harper (1978); Rempel and Carter (1987); Roback (1986)
***Rheopelopia acra* group**	Epler (2001); Roback (1981)	Hudson *et al.* (1990); Roback (1981)
Thienemannimyia senata	Roback (1981)	Cloutier and Harper (1978); Hudson *et al.* (1990); Roback (1981)
***Procladius (Holotanypus)* sp.**	Roback (1980)	Cloutier and Harper (1978); McShaffrey and Olive (1985); Roback (1980)
Subfamily Diamesinae		
***Diamesa* sp.**	Epler (2001); Doughman (1983); Hansen and Cook (1976); Rossaro 1980; Rossaro and Lencioni (2015 a,b); Sæther and Andersen (2013a)	Epler (2001); Doughman (1983); Hansen and Cook (1976); Rossaro and Lencioni (2015a, b); Rossaro *et al.* (2004); Rossaro *et al.* (2016); Sæther and Andersen (2013a)
Pagastia orthogonia	Epler (2001); Garrett (1925); Makarchenko and Makarchenko (2000); Oliver and Roussel (1982)	Epler (2001); Oliver and Roussel (1982)
***Potthastia gaedi* group**	Sæther and Andersen (2013); Serra-Tossio (1971)	Hamerlík (2007); Rossaro (1991); Sæther and Andersen (2013);Serra-Tossio (1971)
***Potthastia longimanus* group**	Sæther and Andersen (2013); Serra-Tossio (1971)	Hamerlík (2007); Rossaro (1991); Sæther and Andersen (2013); Serra-Tossio (1971)
Subfamily Prodiamesinae		
***Monodiamesa* sp.**	Sæther (1973); Sæther and Andersen (2013b)	Sæther (1973); Sæther and Andersen (2013b)
Subfamily Orthocladiinae		
Brillia flavifrons	Oliver and Roussel (1983)	Oliver and Roussel (1983)
Brillia parva	Oliver and Roussel (1983)	Oliver and Roussel (1983)
Cardiocladius albiplumus	Oliver and Bode (1985)	Bass (1986); Oliver and Bode (1985); Rossaro (1991)
***Corynoneura* sp.**	Fu and Sæther (2012)	Simpson and Bode (1980)
Cricotopus (s.s.) albiforceps	Epler (2001)	Orendt (2003); Krasheninnikov (2012)
Cricotopus mackenziensis	Oliver (1977)	Rosenberg *et al.* (1976 a, b)
***Cricotopus (s.s.) tremulus* group**	Hirvenoja (1973); Epler (2001)	Hamerlík (2007); Rossaro (1991); McShaffrey and Olive (1985)
Cricotopus (s.s.) trifascia	Boesel (1983); Epler (2001); Hirvenoja (1973)	Rossaro (1991); McShaffrey and Olive (1985)
Cricotopus (Nostocladius) nostocicola	Epler (2001); Johannsen (1937)	Brock (1960); Dodds and Marra (1989)
***Doncricotopus* sp.**	Sæther (1981); Tuiskunen (1985)	Tuiskunen (1985); Krasheninnikov (2012); Hudson *et al.* (1990)
***Epoicocladius* sp. #3**	Jacobsen (1992)	Jacobsen (1992)
***Eukiefferiella gracei* group**	Epler (2001); Bode (1980, 1983)	Bass (1986); Bode (1980, 1983)
Euryhapsis cilium	Oliver (1981)	Oliver (1981), Tilley (1989),
***Heterotrissocladius marcidus* group**	Sæther (1975a)	Sæther (1975a)
***Hydrsomittia* sp.**	Ferrington and Sæther (2011).	Ferrington and Sæther (2011)
***Krenosmittia* sp.**	Cranston (1983); Epler (2001); Thienemann (1944)	Cranston (1983); Epler (2001); Ferrington (1984); Thienemann (1944); Wartinbee (1979)
Lopescladius (Cordiella) hyporheicus	Andersen *et al.*, (2013); Coffman and Roback (1984)	Andersen *et al.* (2013); Bass (1986); Coffman and Roback (1984)
***Nanocladius (s.s.) dichromus* group**	Andersen *et al.* (2013); Epler (2001); Sæther (1977)	Andersen *et al.* (2013); Epler (2001); Sæther (1977)
Orthocladius (Eud.) dubitatus	Epler (2001); Sæther (2005); Soponis (1977, 1990)	Epler (2001); Sæther (2005); Soponis (1977, 1990)
Orthocladius (Euo.) rivicola	Epler (2001); Sæther (2005); Soponis (1977, 1990)	Epler (2001); Sæther (2005); Soponis (1977, 1990)
Orthocladius (s.s.)* cf. *clarkei	Epler (2001); Sæther (2005); Soponis (1977, 1990)	Epler (2001); Sæther (2005); Soponis (1977, 1990)
Orthocladius (s.s.) obumbratus	Epler (2001); Sæther (2005); Soponis (1977 and 1990)	Epler (2001); McShaffrey and Olive (1985); Sæther (2005); Soponis (1977, 1990)
***Paracricotopus* sp.**	Caldwell (1985), Sæther (1980b)	Caldwell (1985), Sæther (1980b)
***Parakeifferiella* sp.**	Andersen *et al.* (2013); Epler (2001); Schmid (1993);Wülker (1957)	Andersen *et al.* (2013); Epler (2001); Schmid (1993);Wülker (1957)

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Table 3. Continued from previous page.

	Taxonomy	Ecology
Subfamily Orthocladiinae		
Parametriocnemus lundbeckii	Sæther (1969)	Bass (1986); McShaffrey and Olive (1985); Simpson and Bode (1980)
Psectrocladius (s.s.) limbatellus	Andersen *et al.* (2013); Langton (1980)	Andersen *et al.* (2013); Chaloner and Wotton (1996); Langton (1980); Mousavi (2001); Wotton and Hirabayashi (1999)
***Rheocricotopus (Psil.) chalybeatus* group**	Cranston (1983); Namayandeh *et al.,* (2015); Sæther (1985)	Cranston (1983); Namayandeh *et al.,* (2015); Sæther (1985)
***Stictocladius* sp. G**	Sæther and Cranston (2012)	Sæther and Cranston (2012)
Thienemanniella xena	Hestenes and Sæther (2000)	Bolton (1992); Hudson *et al.,* (1990); Rossaro (1991); McShaffrey and Olive (1985)
Tvetenia paucunca	Epler (2001); Sæther (1969)	Berg and Hellenthal (1991); Fiorentino (2005); Sæther (1969)
Tvetenia tshernovskii	Bode (1983); Epler (2001); Przhiboro and Sæther (2010); Mason (1985)	Bode (1983); Przhiboro and Sæther (2010)
Subfamily Chironominae		
Beckidia tethys	Epler *et al.* (2013); Sæther (1977)	Sæther (1977)
Chernovskiia orbicus	Epler *et al.* (2013), Epler (2001); Sæther (1977)	Epler *et al.* (2013), Epler (2001); Sæther (1977)
***Chironomus (s.s.) decorus* group**	Epler (2001); Martin (2012)	Epler (2001); Martin (2012)
Chironomus (s.s.) slainarius group	Epler (2001); Martin (2012)	Epler (2001); Martin (2012)
Cryptochironomus blarina	Curry (1958); Sæther (2012)	Curry (1958); Hudson *et al.* (1990); Sæther (2012)
Demicryptochironomus cuneatus	Epler (2001); Sæther (1977)	Bass (1986); Epler (2001); Sæther (1977)
***Glyptotendipes (Glyptotendipes)* sp.**	Epler *et al.,* (2013)	Epler *et al.* (2013); Hamerlík (2007)
***Microtendipes (s.s.) pedellus* group**	Epler (2001), Epler *et al.,* (2013)	Bass (1986), Epler (2001), Epler *et al.* (2013), Hamerlík (2007)
***Microtendipes (s.s.) rydalensis* group**	Epler (2001); Epler *et al.,* (2013); Pinder (1976)	Epler (2001); Epler *et al.* (2013); Hamerlík (2007); Seire and Pall (2000)
Paracladopelma* cf. *rolli	Chernovskii (1949); Sæther (1977)	Chernovskii (1949); Sæther (1977)
Paracladopelma nereis	Sæther (1977)	Bass (1986); Sæther (1977)
Paralauterborniella nigrohalteralis	Epler *et al.,* (2013)	Bass (1986); Epler *et al.* (2013); McShaffrey and Olive (1985); Rossaro *et al.* (2007)
***Paratendipes connectens* group**	Epler and Ferrington (1994); Hayford (1998)	Goldhammer and Ferrington (1992); Hayford (1998)
***Phaenopsectra punctipes* group**	Epler (2001); Epler (2015)	Mackey (1977)
***Polypedilum (s.s.) fallax* group**	Epler (2001); Maschwitz and Cook (2000)	Bass (1986); Johannsen (1937); Maschwitz and Cook (2000); Roback (1953); Weber (1973)
***Polypedilum (s.s.)laetum* group**	Epler (2001); Maschwitz and Cook (2000)	Brundin (1949); Lehman (1971); Maschwitz and Cook (2000), Reiss (1968), Sæther (1975b)
***Polypedilum (Tripodura) scalaenum* group**	Epler (2001)	Chernovskii (1949); McShaffrey and Olive (1985)
Polypedilum (Uresipedilum) flavum	Epler (2001); Maschwitz and Cook 2000	Harper and Cloutier (1979); Maschwitz and Cook (2000); Soponis (1982)
Robackia claviger	Sæther (1977)	Sæther (1977)
Robackia demeijerei	Chernovskii (1949); Sæther (1977)	Chernovskii (1949); Sæther (1977)
***Stenochironomus (s.s.)* sp.**	Borkent (1984)	Borkent (1984)
***Stictochironomus* sp.**	Epler (2001), Epler *et al.* (2013)	Epler (2001), Epler *et al.* (2013)
***Cladotanytarsus* sp.**	Epler *et al.* (2013)	Bilyj and Davis (1989)
Micropsectra polita	Epler (2001); Oliver and Dillon (1994); Webb (1981)	Epler (2001); Oliver and Dillon (1994); Webb (1981)
Neostempellina reissi	Cranston (2010); Epler (2001); Epler *et al.* (2013)	Cranston (2010); Epler (2001); Epler *et al.* (2013)
***Paratanytarsus* sp.**	Epler *et al.,* (2013)	Hamerlík (2007)
***Rheotanytarsus* sp.**	Epler *et al.,* (2013)	Bass (1986)
***Stempellina* sp.**	Brundin (1948)	Bass (1986); Brundin (1948)
***Stempellinella* sp.**	Ekrem (2007); Epler (2001)	Ekrem (2007); Epler (2001)
***Tanytarsus chinyensis* group**	Hoffman (1971); Reiss and Fittkau (1979)	Chernovskii (1949); Reiss and Fittkau (1979)

Table 4. New geographic distribution records of Chironomidae collected in lower Athabasca River and its tributaries.

Represent new record for Canada	Represent new record for Alberta
Stictocladius sp. G Sæther *et* Cranston	*Nilotanypus fimbriatus* (Walker)
Neostempellina reissi Caldwell	*Pagastia orthogonia* Oliver
	Brillia parva Johannsen
May represent new record for Canada	*Cricotopus (Cricotopus) mackenziensis* Oliver
Paracladopelma rolli Kirpichenko	*Cricotopus (Cricotopus) trifascia* Edwards
Paratendipes basidens Townes	*Epoicocladius* sp. #3 Jacobsen
Lopescladius (Cordiella) hyporheicus Coffman *et* Roback	*Psectrocladius (Psectrocladius) limbatellus* (Holmgren)
	Tvetenia tshernovskii (Pankratova)
	Beckidia tethys (Townes)
	Demicryptochironomus cuneatus (Townes)
	Paracladopelma nereis (Townes)
	Paralauterborniella nigrohalteralis Malloch
	Polypedilum (Uresipedilum) flavum (Johannsen)
	Robackia claviger (Townes)
	May represent new record for Alberta
	Cardiocladius albiplumus Sæther
	Cricotopus (Cricotopus) albiforceps (Kieffer)
	Orthocladius (Orthocladius) clarkei Soponis
	Parakiefferiella gracillima (Kieffer)