

F-04-9
85025

UPPER BLACKFOOT RIVER STUDY

BOTTOM FAUNA IDENTIFICATION DATA

F-04-9

List of Fauna from the Blackfoot River

July 16, 1968, April 29, 1969, October 1, 1969

Plecoptera

Nemouridae

- ✓ Nemoura cinctipes Banks
- ✓ Nemoura besametsa Ricker
- Capnia distincta
- Capnia confusa
- Capnia elongata Claassen

Pteronarcidae

- Pteronarcys californica Newport
- ✓ Pteronarcella badia Hagen

Perlodidae

- ✓ Arcynopteryx parallela Frison and/or A. curvata Hanson
- Isogenus (Kogotus) sp.
- ✓ Isogenus (Cultus) sp. prob. tostonus or aestivalis
- ✓ Isoperla sp.

Chloroperlidae

- ✓ Alloperla sp.
- Hastaperla sp. prob. brevis
- Paraperla frontalis Banks

Perlidae

- ✓ Acroneuria pacifica Banks
- Acroneuria theodora Needham and Claassen
- Acroneuria californica Banks
- ✓ Claassenia sabulosa Banks

Ephemeroptera

Heptageniidae

- Heptagenia elegantula (Eaton)
- ✓ Cinygmula spp.
- ✓ Epeorus longimanus (Eaton)
- Rhithrogena morrisoni (Banks)
- ✓ Rhithrogena sp.

Baetidae

- ✓ Baetis spp.

Leptophlebiidae

Blackfoot River Fauna

Ephemeroptera, cont.

✓ Paraleptophlebia sp. prob. vaciva (Eaton)

Siphonuridae

Ameletus oregonensis McDunnough (Coll. 5/11/71) ✓

Ephemerellidae

Ephemerella flavilinea McD.
Ephemerella tibialis McD.
✓ Ephemerella grandis ingens McD.
✓ Ephemerella infrequens McD.
Ephemerella heterocaudata McD.
Ephemerella hecuba (Eaton)
✓ Ephemerella doddsi Needham

Trichoptera

Rhyacophilidae

Rhyacophila angelita Banks
✓ Rhyacophila acropedes Banks or vao Milne
Rhyacophila coloradensis Banks

Glossosomatidae

✓ Glossosoma sp.
Anagapetus sp.

Philopotamidae

Sortosa (Dolophilodes) aequalis (Banks) (Coll. 5/11/71) ✓

Psychomyiidae

Tinodes sp. or Psychomyia sp.

Hydropsychidae

✓ Hydropsyche sp.
✓ Arctopsyche sp.
Parapsyche sp.

Hydroptilidae

Ochrotrichia sp.

✓ Limnephilidae

Several unidentifiable species

Lepidostomatidae

Lepidostoma sp.

Blackfoot River Fauna

Trichoptera, cont.

Brachycentridae

✓ Brachycentrus sp.

Helicopsychidae

Unidentifiable species

Coleoptera

Elmidae

✓ Zaitzevia sp.

Narpus concolor Le Conte

Lara sp.

✓ Optioservus sp. prob. quadrinaculatus (Horn)

✓ Heterolimnius corpulentus (Le Conte)

Cleptelmis ornata (Schaeffer)

Diptera

✓ Simuliidae

Keys not available for identification of larvae

Tipulidae

✓ Hexatoma spp.

Antocha sp.

Rhabdomastix sp.

Other genera and species

Empididae

Chelifera sp.

Several other genera

Psychodidae

✓ Pericoma sp.

Tanyderidae

Protoplasa fitchii Osten Sacken

Rhagionidae

✓ Atherix variegata Walker

Tendipedidae

Tanytarsus sp.

Pentaneura sp.

✓ Metriocnemus sp.

✓ Hydrobaenus spp.

Brillia sp.

Cardiocladius sp.

✓ Diamesa sp.

and others?

Blackfoot River Fauna

Odonata

Ophiogomphus severus Hagen

Gastropoda

Physa sp.

Stagnicola palustris

Oligochaeta

Planaria

Nematoda

Cottidae

Cottus confusus Bailey and Bond (Shorthead Sculpin)

7 Orders

28 Families

List of Fauna from Blackfoot River
August, 1971

EPHEMEROPTERA

Baetis spp. (probably about 5 species)
Cinygmula sp. (perhaps more than one)
Rhithrogena spp.
Paraleptophlebia sp.
Ameletus sp.
Epeorus deceptivus (McDunnough)
Epeorus longimanus (Eaton)
Ephemerella doddsi Needham
Ephemerella grandis ingens McDunnough
Ephemerella infrequens McDunnough
Ephemerella tibialis McDunnough
Ephemerella hystrix Traver
Ephemerella coloradensis Dodds

PLECOPTERA

Pteronarcella badia Hagen
Nemoura cinctipes Banks
Capnia sp.
Eucapnopsis brevicauda (Claassen) need adults for positive identification
Claassenia sabulosa Banks
Acroneuria pacifica Banks
Acroneuria theodora Needham and Claassen
Acroneuria californica Banks
Arcynopteryx parallela Frison or A. curvata Hanson
Arcynopteryx signata (Hagen)
Isogenas sp.
Isogenus aestivalis (Needham and Claassen)
Alloperla spp.
Paraperla frontalis Banks

TRICHOPTERA

Rhyacophila acropedes Banks or R. vao Milne
Rhyacophila vepula Milne
Rhyacophila sp.
Glossosoma sp.
Anagapetus sp.
Chimarra sp.
Ochrotrichia sp.
Tinodes sp.
Arctopsyche grandis (Banks)
Hydropsyche sp.
Parapsyche admota Ross
Brachycentrus sp.
Lepidostoma sp.
Limnephilid Genus 1
Limnephilid Genus 2 (These designations according to P. Mitchell)

DIPTERA

Simuliidae
Antocha sp.
Hexatoma spp. (at least 5 spp.)
Polymeda sp.?
Pericoma sp.
Empididae type #1
Empididae type #2 (according to Mitchell)

Heleidae, Palpomyia type

Cardiocladius sp.

Orthocladius sp. 2 (found in Nostoc)

sp 1, 3, 4 ?

Metriocnemius sp.

Brillia sp.

Tanytarsus sp. (formerly called Calopsectra)

Pentaneura sp.

various other Chironomidae, mostly Orthocladinae

COLEOPTERA

Zaitzevia sp.

Optioservus sp. prob. quadrimaculatus (Horn)

Heterlimnius corpulentus (Le Conte)

Cleptelmis ornata (Schaeffer)

Narpus concolor Le Conte

Lara sp.

Brychius sp.

NEMATODA

OLIGOCHAETA

Cottus sp.

Blackfoot River at Flesher Pass Road Bridge 4/29/69

Plecoptera 8, 0.2 cc

Claassenia sabulosa Banks
Nemoura besametsa Ricker
Isogenus sp.
Alloperla sp.
Nemoura cinctipes Banks

Trichoptera 7, 0.1 cc

Hydropsyche sp.
Lepidostoma sp.

Ephemeroptera 1, T

Epeorus longimanus (Eaton)

Coleoptera

Zaitzevia sp. ?

Diptera 10, T

Simuliidae
Antocha sp.
Tendipedidae
Brillia sp.

Blackfoot at Flesher Pass Road Bridge 10/1/69

Plecoptera 42, (no vol. given)

Nemoura cinctipes Banks
Alloperla sp.
Claassenia sabulosa Banks
Acronuria pacifica Banks
Paraperla frontalis Banks

Trichoptera 8,

Brachycentrus sp.
Arctopsyche sp.

Ephemeroptera

Cinygmula sp.

Diptera 24,

Antocha sp.
Simuliidae
Hexatoma sp.
Tendipedidae

Number and Kinds of Major Aquatic Insects Collected with Kick Screen (+ 4 ft² Sample) from Blackfoot River
in 1968 and 1969
February, 1972

[illegible]

Number and Kinds of Major Aquatic Insects Collected from Blackfoot River in 1968 and 1969

Page 2

Location Month/Yr No. of Samples	Pop's			Flesher			Hogum			Dalton			Canyon			Rainbow		
	7/68	4/69	10/69	7/68	4/69	10/69	7/68	4/69	10/69	7/68	4/69	10/69	7/68	4/69	10/69	7/68	4/69	10/69
	2	1	1	1	1	1	1	1	1	1	None	1	1	None	1	1	None	None
Hydropsyche	x				x		x								x	x		
Arctopsyche	x		x												x	x		
Psychomyia																		
Parapsyche			x															
Ochrotrichia							x	x	x	x	x							
Lepidostoma							x	x	x	x	x							
Brachycentrus	x				x										x			
Limnephilidae																		
<u>Coleoptera (Beetles)</u>	8				UN		124	14	50	12	5	13	9			1		
Zaitzevia	x				x		x	x	x		x							
Narpus					x		x	x			x							
Lara					x		x	x			x							
Optioservus							x	x	x		x				x			
Heterlimnius							x	x	x		x				x			
Cleptelmis							x	x			x							
<u>Diptera (True flies)</u>	51				10		813	91	44	443	26	39	92		24			
Hexatoma					x		x		x	x		x	x		x	x		
Antocha					x		x		x									
Rhabdomastix							x		x									
Chelifera							x		x									
Pericoma																		
Protoplasa									x									
Atherix																		
Tanytarsus							x											
Pentaneura							x											
Metriocnemus																		
Hydrobaenus																		
Brillia	x				x													
Cardiocladius																		
Diamesa																		
Simuliidae																		
Tendipedidae																		
Empididae																		

UN = Unknown
 ? = Identity not positive
 () = Indicates more than one species

MONTANA FISH AND GAME DEPARTMENT
Environmental Resources Division

Number and Volume of Major Aquatic Insects Collected from Blackfoot River with
Kick Screen ($\pm 4 \text{ ft}^2$ Sample) in 1968 and 1969 by Order. Volume in cc.

February, 1972

Location	Pop's		Flesher		Hogum		Dalton		Canyon		Rainbow	
Year	1968	1969	1968	1969	1968	1969	1968	1969	1968	1969	1968	1969
No. of Samples	2	2	1	2	1	2	1	1	1	1	1	None
Plecoptera												
No.	4	95+	22	50	53	114	17	69	7	78	23	
Vol.	T	0.3+	0.4	-	0.7	-	0.9	-	0.05	-	5.5	
Ephemeroptera												
No.	0	2	10	1	508	32	432	229	475	401	85	
Vol.	-	-	0.1	T	1.4	-	1.6	-	1.9	-	0.25	
Tricoptera												
No.	12	4	24	15	155	399	24	211	6	139	76	
Vol.	0.4	0.1	0.2	UN-0.1	1.3	-	0.2	-	0.1	-	0.7	
leoptera												
No.	8		32		124	50	12	5	9	13	1	
Vol.	T-0.05		0.05		0.05	-	0.05	-	T	-	T	
Diptera												
No.	51	2	91	34	813	44	443	26	92	39	24	
Vol.	T-0.1	T	0.4	UN-T	2.0	-	0.9	-	0.6	-	0.3	
Odonata												
No.	0	0	0	0	0	0	0	0	0	0	0	
Vol.	-	-	-	-	-	-	-	-	-	-	-	

T = Trace ($< .01$)

- = Vol. not known

UN = Vol. not given for one sample

Blackfoot River at Pop's Place 7/16/68

#1 Plecoptera 2 T

Paraperla, Alloperla or Kathroperla spp. (too small to identify)

Trichoptera 7 .2 cc

Rhyacophila angelita Banks
Brachycentrus sp.

Coleoptera 1 T

Zaitzevia sp.

Diptera 34 .1 cc

Tendipedidae:
Hydrobaenus sp.

#2 Plecoptera 2 T

Nemoura besametsa Ricker
Paraperla, Alloperla or Kathroperla spp. (too small to identify)

Trichoptera 5 .2 cc

Rhyacophila angelita Banks
Brachycentrus sp.
Hydropsyche sp.
Arctopsyche sp.

Station D. I.

D = 1.37131 DMIN = 0.385691
DMAX = 2. R = 0.37186

Coleoptera 7 .05 cc

Zaitzevia sp.

#1 And #2 combined

Diptera 17 T

Tendipedidae
Hydrobaenus sp.

Blackfoot at Pop's Place 4/29/69 pH 7.9

Plecoptera 1

Nemoura cinctipes Banks

Ephemeroptera 1

Cinygmula sp.

D = DMIN = DMAX
R is undefined

Blackfoot River at Pop's Place 10/1/69

Plecoptera 95, 0.3 cc

Hastaperla brevis ?
Nemoura cinctipes Banks
Alloperla sp.
Isogenus sp.

Station D.I.

D = 0.244142 DMIN = 3.14620E-2 = .0814620
DMAX = 1. R = 0.822893

Trichoptera 4, 0.1 cc

Parapsyche sp.
Rhyacophila acropedes or vao
Arctopsyche sp.

Blackfoot at Flesher Pass Road Bridge 7/16/68

Plecoptera 22 .4 cc

Claassenia sabulosa
Alloperla sp.
Acroneuria pacifica
Nemoura cinctipes
~~Hastaperla~~ sp.
HASTAPERLA sp.

Trichoptera 24 .2 cc

Rhyacophila vao or acropedes
Rhyacophila angelita
Brachycentrus sp.

Station D.I.

Ephemeroptera 10 .1 cc

D = 1.93312 DMIN = 0.199112
DMAX = 2.32193 R = 0.183153

Epeorus longimanus (Eaton)
Baetis sp.
Cinygmula sp.

Coleoptera 32 .05 cc

Zaitzevia sp
Naryus concolor Le Conte
Lara sp.
Optioservus prob. quadrinaculatus

Diptera 91 .4 cc

Simuliidae
Hexatoma sp.
Empididae
Tendipedidae

Blackfoot River at Hogum Creek Road Bridge 7/16/68

Plecoptera 53 .7 cc

Claassenia sabulosa Banks
Acroneuria pacifica Banks
Kathroperla sp.
Acroneuria theodora Needham and Claassen
Nemoura cinctipes Banks
Alloperla sp.

Trichoptera 155 1.3 cc

Brachycentrus sp.
Rhyacophila acropedes or vao
Rhyacophila angelita Banks
Hydropsyche sp.
Limnephilidae (keys to Astenophylax in key, but isn't.)
Psychomyia flavida (Hagen) or lumina (Ross)
Anagapetus sp.
Lepidostoma sp.
Ochrotrichia sp.

Ephemeroptera 508 1.4 cc

Paraleptophlebia vaciva ?
Ephemerella flavilinea McDunnough
Ephemerella tibialis McDunnough
Epeorus longimanus (Eaton)
Eaetis spp.
Cinygula sp.

Coleoptera 124 .05 cc

Zaitzevia sp.
Lara sp.
Narpus sp. prob. concolor
Optioservus sp.
Heterolimnius sp. prob. corpulentus
Chrysomelidae adult, prob. not aquatic

Diptera 813 2.0 cc

Hexatoma sp.
Antocha sp.
Simuliidae
Rhabdomastix sp. ?
Tendipedidae
Pentaneura sp.
Tanytarsus sp.

Station D.I.

D = 1.78627 DMIN = 2.93571E-2 = .0293571
DMAX = 2.32193 R = 0.833651

Blackfoot River at Hogum Creek Road Bridge 4/29/69

Plecoptera 65, 1.10 cc

Acroneuria pacifica Banks
Claassenia sabulosa Banks
Nemoura besametsa Ricker
Nemoura cinctipes Banks
Alloperla sp.
Capnia distincta
Capnia sp. prob. elongata or confusa
Isoperla sp.

Trichoptera 62, 0.5 cc

Rhyacophila acropedes or vao
Glossosoma sp.
Lepidostoma sp.
Hydropsyche sp.
Brachycentrus sp.
Limnephilidae

Ephemeroptera 254, 1.4 cc

Baetis spp.
Ephemerella infrequens McDunnough
Cinygmula sp.
Epeorus longimanus (Eaton)
Ephemerella grandis ingens McDunnough
Paraleptophlebia vaciva Eaton ?
Rhithrogena sp. (too small for proper identification)
Ephemerella sp. (too small for proper identification)

Coleoptera 14, 1.05 cc

Narpus concolor LeConte
Optioservus prob. quadrifasciatus
Heterlimnius prob. corpulentus

Diptera 91, 0.1 cc

Pericoma sp.
Simuliidae
Tendipedidae
 Metriocnemus sp.
 Cardiocladius sp.
 Dixa sp.

✓ Shells of Stagnicola palustris snails 10, 0.1 cc

Station D.I.

D = 1.85639 DMIN = 8.52803E-2 = .0852803
DMAX = 2.32193 R = 0.20314

Blackfoot River at Hogum Creek Road Bridge 10/1/69

Plecoptera 49

Hastaperla sp.
Arcynopteryx parallela Frison (or curvata)
Acroneuria pacifica Banks
Capnia distincta or confusa
Nemoura cinctipes Banks

Trichoptera 399

Rhyacophila acropedes Banks or vao Milne
Brachycentrus sp.
Lepidostoma sp.
Hydropsyche sp.
Limnephilidae

Ephemeroptera 32

Ephemerella grandis ingens McDunnough
Paraleptophlebia sp., prob. vaciva Eaton
Cinygmula sp.
Ephemerella sp.

Coleoptera 50

Heterlimnius corpulentus (Le Conte)
Optioservus sp. prob. quadrinaculatus
Zaitzevia sp.

Diptera 44

Station D.I.

Antocha sp.
Rhabdomastix sp.
Pericoma sp.
Hexatoma sp.
Simuliidae

D = 1.49871 DMIN = 7.38855E-2 = .0738855
DMAX = 2.32193 R = 0.36975

Blackfoot at Dalton Mountain Road Bridge 7/16/68

Plecoptera 17 .9cc

Acroneuria pacifica Banks
Claassenia sabulosa Banks
Isogenus (Kogotus) sp.
Pteronarcys californica (prob.)
Alloperla or Kathroperla spp.
Nemoura cinctipes Banks

Trichoptera 24 .2 cc

Rhyacophila acropedes Banks or vao Milne
Brachycentrus sp.
Limnephilidae

Blackfoot at Dalton, cont.

Ephemeroptera 432 1.6 cc

Rhithrogena sp. prob. undulata (Banks)
Ephemerella doddsi Needham
Ephemerella flavilinea McDunnough
Ephemerella tibialis McDunnough
Ephemerella infrequens McDunnough
Epeorus longimanus (Eaton)
Baetis spp. (Two easily distinguishable species)
Cinygmula sp.

Coleoptera 12 .05 cc

Cleptelmis ornata (Schaeffer)
Heterolimnius corpulentus (Le Conte)
Optioservus prob. quadrimaculatus

Diptera 443 .9 cc

Protoplasa fitchii Osten Sacken
Atherix variegata Walker
Hexatoma spp.
Simuliidae
Tendipedidae

Station D.I.

D = 1.26031 DMH = 3.19399E-2 = .0319399
DMAX = 2.32193 E = 6.463373

Blackfoot River at Dalton Mountain Road Bridge 10/1/69

Plecoptera 69

Pteronarcella badia Hagen
Alloperla sp.
Acroneuria pacifica Banks
Pteronarcys californica Newport
Arcynopteryx parallela Frison (probably)
Isogenus (Cultus) sp. prob. tostonus or aestivalis

Trichoptera 211

Brachycentrus sp.
Arctopsyche sp.
Rhyacophila vao Milne or acropedes Banks
Glossosoma sp.
Hydropsyche sp.
Limnephilidae

Ephemeroptera 229

Ephemerella grandis
Rhithrogena hageni Eaton ?
Ephemerella doddsi Needham
Baetis sp.
Ephemerella infrequens McDunnough

Dalton, cont.

Coleoptera 5

Cleptelmis ornata (Schaeffer)
Narpus concolor Le Conte
Optioservus sp.

Diptera 26

Atherix variegata Walker
Simuliidae
Protoplasa fitchii Osten Sacken
Tendipedidae

Station D.I.

D = 1.70711 DMIN = 7.73326E-2 = .0778826
DMAX = 2.32193 R = 0.273976

✓ Oligochaeta

Blackfoot River at Blackfoot Canyon Camp 7/16/68

Plecoptera 7 .05 cc

Acroneuria pacifica Banks
Pteronarcys californica Newport
Hastaperla brevis (probably) or Alloperla sp.

Trichoptera 6 .1 cc

Station D.I.

Hydropsyche sp.
Brachycentrus sp.
Lepidostoma sp.

D = 0.904237 DMIN = 7.22575E-2 = .0722575
DMAX = 2.32193 R = 0.630177

Ephemeroptera 475 1.9 cc

Epeorus longimanus (Eaton)
Cinygmula sp.
Baetis spp. (2 types)
Rhithrogena sp. prob. undulata (Banks)
Ephemerella flavilinea McDunnough
Ephemerella infrequens McD.
Ephemerella tibialis McD.

Coleoptera 9 T

Optioservus sp. prob. quadrimaculatus

Diptera 92 .6 cc

Atherix variegata Walker
Hexatoma spp. (3 spp.)
Simuliidae
Empididae
Tendipedidae

✓ Aquatic insect Eggs .1 cc

✓ Nematoda 1 T

✓ Gastropoda ?1 T

Hydrobaenus sp.

Blackfoot River at Blackfoot Canyon Camp 10/1/69

Plecoptera 78

Acroneuria pacifica Banks
Claassenia sabulosa Banks
Pteronarcella badia (Hagen)
Alloperla sp. or Hastaperla sp.
Pteronarcys californica Newport
Arcynopteryx parallela (Frison) or curvata Hanson
Paraperla frontalis
Nemoura sp.

Trichoptera 139

Arctopsyche sp.
Hydropsyche sp.
Brachycentrus sp.
keys to Limnephilid Genus C
Glossosoma sp.

Ephemeroptera 401

Rhithrogena hageni or undulata
Baetis spp. (2 types)
Ephemerella tibialis McD.
Ephemerella grandis ingens
Ephemerella sp.

Coleoptera 13

Heterolimnius corpulentus (Le Conte)
Optioservus prob. quadrifaculatus (Horn)

Diptera 39

Hexatoma sp.
Atherix variegata Walker
Protoplasa fitchii Osten Sacken
Simuliidae
Epididae
Tendipedidae

Hydrobaenus sp.

Station D.I.

✓ Oligochaeta 2 spp.

✓ Planaria

D = 1.62434 DMIN = 6.46352E-2 = .0646352
DMAX = 2.32193 R = 0.369036

Blackfoot River at Ovando-Helena Old Road Crossing 7/16/69

Plecoptera 5 .loc

Acroneuria pacifica Banks
Pteronarcys californica Newport
Claassenia sabulosa Banks

Ovando-Helena Crossing, cont.

Trichoptera 84 .9 cc

Helicopsyche (shells)
Brachycentrus sp.
Hydropsyche sp.
Arctopsyche sp.
Limnephilidae

Ephemeroptera 49 .3 cc

Heptagenia elegantula (prob.)
Epeorus longimanus (Eaton)
Ephemerella tibialis McD.
Ephemerella flavilinea McD.
Ephemerella infrequens McD.
Rhithrogena undulata (Banks) (probably)
Laetis sp.

Coleoptera 11 T

Optioservus sp.
Zaitzevia sp.

Station D.I.

Diptera 36 .6 cc

Antocha sp.
Atherix variegata Walker
Hexatoma sp.
Empididae - Chelifera sp. ?
Tendipedidae

D = 1.86729 DMIN = 0.193694
DMAX = 2.32193 D- = 0.21362

✓ Odonata 1 .05 cc

Ophiogomphus severus Hagen (prob.)

✓ Gastropoda? 4 .1 cc

Blackfoot River $\frac{1}{2}$ mile E. of Greenough Hill 7/18/68

Plecoptera 65 5.0 cc

Pteronarcys californica Newport
Claassenia sabulosa Banks
Acroneuria californica (Banks)

Trichoptera 37 .4 cc

Arctopsyche sp.
Brachycentrus sp.
Hydropsyche sp.
Rhyacophila coloradensis Banks

Greenough, cont.

Ephemeroptera 95 .5 cc

Epeorus longimanus (Eaton)
Ephemerella flavilinea McD.
Ephemerella tibialis McD.
Ephemerella heterocaudata McD.
Rhithrogena undulata (Banks) ?
Baetis spp.

Coleoptera 1 T

Zaitzevia sp.

Diptera 62 .2 cc

Atherix variegata Walker
Simuliidae
Tendipedidae
Hydrobaenus sp.
Cardiocladius sp.

✓ Oligochaeta 3 T

Station D.I.

D = 1.95586 DMIN = 0.145445
DMAX = 2.32193 R= 0.16356

Blackfoot River at Rainbow Bend

7/18/68

Plecoptera 23 5.5 cc

Pteronarcys californica Newport
Glaassenia sabulosa Banks

Trichoptera 76 .7 cc

Glossosoma sp.
Hydropsyche sp.
Arctopsyche sp.

Station D.I.

Ephemeroptera 85 .25 cc

Epeorus longimanus (Eaton)
Baetis spp. (2 types)
Ephemerella flavilinea McD.
Ephemerella tibialis McD.
Ephemerella hecuba (Eaton)
Rhithrogena undulata (Banks) (prob.)

D = 1.88438 DMIN = 0.174855
DMAX = 2.32193 R= 0.241046

Coleoptera 1 T

Optioservus sp.

✓ Gastropoda 3 .15 cc

Diptera 24 .30 cc

Physa sp.

Antocha sp.
Protoplasa fitchii Osten Sacken
Atherix variegata Walker
Hexatoma sp.
Tendipedidae

✓ Oligochaeta 5 T

ALICE CREEK AT HIGHWAY 200 Bridge #4

8-24-71

4 sq. ft.

L. Spence

EPHEMEROPTERA 83 0.3

<u>Baetis</u> spp.	11	
<u>Gyngmula</u> sp.	7	
<u>Epeorus</u> <u>deceptivus</u>	2	
<u>Rhithrogena</u> sp.	2	
<u>Ephemerella</u> <u>doddsi</u>	35	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	11	
<u>Ephemerella</u> <u>tibialis</u>	10	
<u>Ephemerella</u> <u>coloradensis</u>	3	
<u>Ephemerella</u> <u>hystrix</u>	1	Total 82

PLECOPTERA 24 0.1

<u>Nemoura</u> <u>cinctipes</u>	2	
<u>Pteronarcella</u> <u>badia</u>	1	
<u>Acroneuria</u> <u>pacifica</u>	2	
<u>Arcynopteryx</u> <u>parallela</u> or <u>curvata</u>	12	
<u>Arcynopteryx</u> <u>signata</u>	1	
<u>Alloperla</u> sp.	3	Total 21

TRICHOPTERA 179 1.1

<u>Hydropsyche</u> sp.	12	
<u>Arctopsyche</u> <u>grandis</u>	43	
<u>Brachycentrus</u> sp.	41	
<u>Glossosoma</u> sp.	4	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	10	
<u>Rhyacophila</u> <u>vepulaa</u>	1	
<u>Chimarra</u> sp.	1	
<u>Ochrotrichia</u> sp.	1	
<u>Limnephilid</u> Genus 1	36	
<u>Limnephilid</u> Genus 2	15	
<u>Lepidostoma</u> sp.	5	
Pupae	5	Total 174

DIPTERA 113 0.7

<u>Simuliidae</u>	15	
<u>Antocha</u> sp.	8	
<u>Hexatoma</u> sp.	3	
<u>Empididae</u> #1	2	
<u>Cardiocladius</u> sp.	6	
<u>Orthocladius</u> sp.1	13	
<u>Orthocladius</u> sp.2	10	
<u>Orthocladius</u> sp.3	1	
<u>Orthocladius</u> sp.4	11	
<u>Brillia</u> sp.	7	
<u>Metriocnemius</u> sp.	27	
<u>Tanytarsus</u> sp.(= <u>Calopsectra</u>)	4	
Unknown Chironomidae	8	Total 115

COLEOPTERA 28 T

<u>Optioservus</u> sp.	larvae 4 adults 12	16	
<u>Zaitzevia</u> sp.	larvae 2 adults 3	5	
<u>Heterlimnius</u> sp.	larvae 6 adults 1	7	Total 28

✓ Nematoda 1 T

✓ Cottus 1

Original Total 428 Final Total 422

Station D.I.

D = 1.98386 DMIN = 9.53889E-2 = .0953869
DMAX = 2.32193 R = 0.151829

Based on Order numbers rather than
Species numbers.

MARCH 1971 Insect samples returned from
Pat Mitchell.

	Sample No.		
Blackfoot R. @:			
Canyon	✓ 1	2	✓ 3
Dalton	✓ 1	2	✓ 3
Noquim	✓ 1	✓ 2	3 ✓ 4
Flesher	1	2	✓ 3
Poorman Cr.	✓ 1	✓ 2	✓ 3
Alice Cr.	1	lost 2	3 ✓ 4

✓ Insect vials accounted for.

all stations accounted for
on Aug. 9, 1972. Pat has returned a
March 1971 samples. ✓

Contents:

Alice Creek at Hwy 200 Br. #1

Alice Creek at Hwy 200 Br. #3

Blackfoot at Dalton #2

Blackfoot at Blackfoot Canyon #2

128 vials ↗

Flesher #s 1, 2, 3

wouldn't fit in box,
but are finished.

From Pat Mitchell in ~~Feb 1971~~ sometime
Feb 1972

• Aquatic Insect Samples - March 1971 Received
from Pat Mitchell on July 27, 1972

Contents

Sent Airmail, insured.

Blackfoot at Flecker #1

Ephemeroptera

Plecoptera

Diptera

Trichoptera

OK

Blackfoot at Flecker #2

Plecoptera

Trichoptera

OK

Ephemeroptera

Diptera 11,

Alice Creek #1

OK

Trichoptera

OK 17

Hogum #3

Plecoptera

Trichoptera

OK

Diptera

Ephemeroptera

Poorman Creek #3

Diptera

OK

17

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #1

3/15/71

3.5 miles above Arrastra Creek. 1 sq. ft. 5' from ht. bank.
L. Spence. 1420.

EPHEMEROPTERA 347 0.6

<u>Baetis parvus</u> type	21	
<u>Baetis</u> sp.	27	
<u>Paraleptophlebia</u> sp. prob. <u>heteronea</u>	4	
<u>Ephemerella infrequens</u>	45	
<u>Ephemerella grandis</u> <u>ingens</u>	2	
<u>Ephemerella</u> sp. prob. <u>flavilinea</u>	17	
<u>Ephemerella hystrix</u>	1	
<u>Rhithrogena</u> sp.	227	
<u>Cinygmula</u> sp.	4	
<u>Epeorus longimanus</u>	1	Total 349

PLECOPTERA 64 0.7

<u>Pteronarcella badia</u>	5	
<u>Nemoura besametsa</u>	4	
<u>Capnia</u> spp.	2	
<u>Isoperla</u> sp.	12	
<u>Arcynopteryx parallela</u> or <u>curvata</u>	1	
<u>Acroneuria pacifica</u>	4	
<u>Acroneuria</u> sp.	2	
<u>Claassenia sabulosa</u>	5	
<u>Alloperla</u> sp.	22	Total 57

TRICHOPTERA 161 0.5

<u>Glossosoma</u> sp.	62	
<u>Brachycentrus</u> sp.	29	
<u>Hydropsyche</u> sp.	66	
<u>Arctopsyche grandis</u>	1	
<u>Lepidostoma</u> sp.	2	Total 180

DIPTERA 232 0.3

<u>Simuliidae</u>	185	
<u>Atherix variegata</u>	20	
<u>Hexatoma</u> spp.	13	
<u>Empididae</u> #4	1	
<u>Rhabdomastix</u> sp.	1	
<u>Empididae</u> #1	1	
<u>Brillia</u> sp.	8	
<u>Hydrobaenus</u> sp. 1	2	
Unknown tendipedid (like <u>Brillia</u>)	1	Total 232

COLEOPTERA 5 T

{ <u>Optioservus</u> adult	2	
{ <u>Optioservus</u> sp. larvae	3	Total 5

Counted and Identified by
Patricia Ann Mitchell
April 18, 1972

Patricia Ann Mitchell

Original Total - 829
Final Total - 823

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #2

3/18/71

3.5 miles above Arrastra Creek

1 sq. ft. sample 4' from R. bank downstream from bridge. L. Spence. 1435

Ephemeroptera 326 0.6

Rithrogena sp. (undulata?) 233
Baetis spp. 49
Ephemerella infrequens 18
✓ Ephemerella sp. (too small to identify) 7
Paraleptophlebia sp. 3
Cinygmula sp. 3
Ephemerella grandis ingens 1

Total ~~313~~ 314

Plecoptera 46 1.0

Alloperla sp. 14
Pteronarcella badia 7
Isoperla sp. 10
Acroneuria pacifica 5
Arcynopteryx parallela or curvata 4
Claassenia sabulosa 4
Capnia spp. 4
Nemoura sp. prob. besametsa 2
Brachyptera sp. 1

Total 51

Trichoptera 166 0.6

Glossosoma sp. 105
Brachycentrus sp. 36
Hydropsyche sp. 20
Arctopsyche ~~18~~ ^{grandis} 2
Limnephilidae 1

Total 164

Diptera 158 0.3

Simuliidae 136
Hexatoma sp. 4
Dicranota sp. 3
Metriocnemus sp. 2 3
Hydrobaenus sp. 1 1
Hydrobaenus sp. 2 1
Atherix variegata 2

Total 150

Coleoptera 1 T

Optioservus larva 1

Total 1

✓ Cottus 3

Original Total 697
 Final Total ~~697~~ 690

BLACKFOOT R. AT BLACKFOOT CANYON CAMP #3

3/18/71

3.5 miles above Arrastra Cr. 1 sq. ft. sample 4' from left bank downstream from bridge. L. Spence. 1450.

Ephemeroptera 555 0.9

Original Total 912

Final Total 913

<u>Baetis parvus</u> type	16
<u>Baetis</u> sp.	20
<u>Cinygmula</u> sp.	14
<u>Epeorus longimanus</u>	2
<u>Rhythrogena</u> sp.	455
<u>Ameletus</u> sp.	1
<u>Paraleptophlebia</u> sp.	2
<u>Ephemerella infrequens</u>	27
<u>Ephemerella</u> sp. prob. <u>flavilinea</u>	21
<u>Ephemerella grandis ingens</u>	1

D = 1.48334 DMIN = 0.105847
 DMAX = 3.58496 R = 0.604069

Total 559

Plecoptera 107 0.5

<u>Nemoura besametsa</u>	3
<u>Capnia</u> sp.	2
<u>Pteronarcella badia</u>	3
<u>Isoperla</u> sp.	22
<u>Alloperla</u> sp.	46
<u>Hastaperla brevis?</u>	19
<u>Acroneuria pacifica</u>	8
<u>Claassenia sabulosa</u>	1

D = 2.6822 DMIN = 0.438945
 DMAX = 3.45943 R = 0.256641

Total 104

Trichoptera 212 0.8

<u>Arctopsyche grandis</u>	5
<u>Hydropsyche</u> sp.	55
<u>Brachycentrus</u> sp.	35
<u>Glossosoma</u> sp.	108
<u>Limnephilidae</u>	8

Total 211

D = 1.64618 DMIN = 9.58678E-2 = .0950678
 DMAX = 2.58496 R = 0.377036

Diptera 17 0.6

<u>Hexatoma</u> spp. (3 species)	12
<u>Antocha</u> sp.	1
<u>Rhabdomastix</u> sp.	1
<u>Empididae</u> species #1	1
<u>Empididae</u> species #3	1
<u>Atherix variegata</u>	6
<u>Simuliidae</u>	3
✓ <u>Tendipedidae</u> pupa	1

D = 1.24907 DMIN = 0.32223
 DMAX = 3.80735 R = 0.734058

Total 26

Coleoptera 1 T

S=1 NO diversity computed

<u>Optioservus</u> sp. adult	1
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Total 1

✓ <u>Oligochaeta</u> 20 T	20
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Station D.I.

D = 3.33792 DMIN = 0.227017
 DMAX = 5.45943 R = 0.405471

BLACKFOOT RIVER AT DALTON MTN. ROAD BRIDGE #1

3/19/71

1 sq. ft. sample from right bank of riffle above bridge. L. Spence. 1000

Ephemeroptera 274 0.5

<u>Baetis parvus</u> type	4	
<u>Baetis</u> spp.	14	
<u>Cinygmula</u> sp.	10	
<u>Rhithrogena</u> sp.	197	
<u>Paraleptophlebia</u> sp.	2	
<u>Ephemerella infrequens</u>	45	
<u>Ephemerella doddsi</u>	1	
<u>Ephemerella</u> sp.- prob. <u>flavilinea</u> *	10	Total 283

Plecoptera 42 0.4

<u>Acroneuria pacifica</u>	9	
<u>Nemoura besametsa</u>	1	
<u>Isoperla</u> sp.	8	
<u>Isogenus</u> sp.	2	
<u>Alloperla</u> sp.	10	
<u>Hastaperla brevis</u>	2	
<u>Pteronarcella badia</u>	1	
<u>Claassenia sabulosa</u>	1	
Unknown*	2	Total 36

Trichoptera 140 0.8

<u>Arctopsyche grandis</u>	26	
<u>Hydropsyche</u> sp.	19	
<u>Brachycentrus</u> sp.	10	
<u>Glossosoma</u> sp.	81	
<u>Limnephilidae</u>	1	
✓ Pupa	1	Total 138

Diptera 24 0.1

<u>Antocha</u> sp.	5	
<u>Atherix variegata</u>	3	
<u>Empididae</u> , species #4	1	
<u>Pericoma</u> sp.	3	
<u>Cardiocladius</u> sp.	4	
<u>Metriocnemus</u> sp.	3	
<u>Brillia</u> sp.	1	
<u>Hydrobaenus</u> sp. 6	6	
<u>Tendipedidae</u> (slides 19A, 20A)	3	Total 29

Coleoptera 33 T

Heterlimnius sp. prob. corpulentus larvae 2

Dalton, No. 1, 3/19/71

Coleoptera, cont.

{	<u>Optioservus</u> sp. larvae	20
{	<u>Optioservus</u> sp. adults	3
{	<u>Cleptelmis ornata</u> larvae	4
{	<u>Cleptelmis ornata</u> adults	1
		<u>30</u>

✓ Annelida and Nematodes 74 0.1

Oligochaeta 69

✓ Cottus 1

Original Total ⁵⁸⁷~~588~~
Final Total 585

Identified and Counted by

Patricia Ann Mitchell
137 Lynn Ave.
Ames, Iowa 50010

Patricia Ann Mitchell

BLACKFOOT RIVER AT DALTON RD. BRIDGE #2
3/19/71

1 sq. ft. sample from left bank of riffle above bridge. L. Spence.

Ephemeroptera 219 0.4

Ephemerella grandis ingens 2
Ephemerella doddsi 2
Ephemerella infrequens 4
✓ Ephemerella sp. (too small to identify) 7
Rhithrogena sp. (undulata?) 103
Baetis spp. 45
Cinygmula mimus or kootenai 9

D = 1.39698 DMIN = 0.154334
DMAX = 3.45943 R= 0.472741

Total 172

Plecoptera 16 0.1

Pteronarcella badia 1
Alloperla sp. 15
Isoperla sp. 1

D = 2.07867 DMIN = 0.648717
DMAX = 3.32193 R= 0.465831

Total 17

Trichoptera 256 0.4

Glossosoma sp. 178
Hydropsyche sp. 62
Arctopsyche sp. 6
Brachycentrus sp. 5
Limnephilidae 3

D = 1.64383 DMIN = 7.70141E-2 = .0770141
DMAX = 2.58496 R= 0.375573

Total 254

Diptera 20 0.1

Hexatoma sp. 3
Atherix variegata 8
Dicranota sp. 1
Cardiocladius sp. 3
Small Tendipedidae 4

D = 3.25441 DMIN = 1.15912
DMAX = 3.78044 R= 0.173511

Total 19

Coleoptera

Heterlimnius sp. larva 1

✓ Oligochaeta 1 T

D = 1.87012 DMIN = 0.489633
DMAX = 1.58496 R= 0.438044

✓ Nematoda 1 T

Station D.I.

Original total ~~513~~ 514
Final total 465

D = 3.48293 DMIN = 0.310301

BLACKFOOT River at DALTON ROAD BRIDGE #3
3/19/71

1 sq. ft. sample from left side of riffle above bridge. L. Spence. 1035

EPEHEMEROPTERA 295 0.5

<u>Ephemerella</u> sp. prob. <u>flavilinea</u>	27	
<u>Ephemerella</u> <u>infrequens</u>	6	
<u>Ephemerella</u> <u>doddsi</u>	2	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	5	
<u>Cinygmula</u> sp.	6	
<u>Rhithrogena</u> spp. including <u>undulata</u>	142	
<u>Rhithrogena</u> <u>robusta</u>	1	
<u>Baetis</u> <u>parvus</u> type	30	
<u>Baetis</u> sp.	39	Total 258

PLECOPTERA 63 0.2

<u>Pteronarcella</u> <u>badia</u>	3	
<u>Capnia</u> spp.	4	
<u>isogenus</u> sp.	1	
<u>Isoperla</u> sp.	4	
<u>Hastaperla</u> <u>brevis</u> ?	4	
<u>Alloperla</u> sp.	43	
<u>Acroneuria</u> <u>pacifica</u>	2	Total 61

TRICHOPTERA 283 1.3

<u>Brachycentrus</u> sp.	85	
<u>Glossosoma</u> sp.	160	
<u>Hydropsyche</u> sp.	47	
<u>Arctopsyche</u> <u>grandis</u>	23	
<u>Rhyacophila</u> sp. 1	1	
<u>Limnephilidae</u>	1	Total 317

DIPTERA 33 0.1

<u>Atherix</u> <u>variegata</u>	6	
<u>Empididae</u> #4	1	
<u>Simuliidae</u>	1	
<u>Hexatoma</u> spp.	4	
<u>Dicranota</u> sp.	1	
<u>Cardiocladius</u> sp.	2	
<u>Brillia</u> sp.	2	
<u>Metriocnemus</u> sp.	12	
<u>Pentaneura</u> sp.	1	
Unknown tendipedid - on slide	1	Total 31

OLIGOCHAETA 1

Total 1

Original Total ~~671~~ 675
Final Total 668

Identified and Counted by
Patricia Ann Mitchell
March 20, 1972

Patricia Ann Mitchell

4/14/71

1 sq. ft. sample from right edge of stream. L. Spence.

EPHEMEROPTERA 373 0.6

<u>Baetis parvus</u> type (<u>tricaudatus</u> ?)	48	
<u>Baetis</u> sp.	75	
<u>Cinygmula</u> sp.	103	
<u>Epeorus longimanus</u>	35	
<u>Rhithrogena</u> sp.	52	
<u>Ephemerella infrequens</u>	6	
<u>Ephemerella flavilinea</u>	58	
<u>Ephemerella doddsi</u>	5	
<u>Ephemerella hystrix</u>	5	
<u>Paraleptophlebia</u> sp. prob. <u>heteronea</u>	6	Total 393

PLECOPTERA 72 0.4

<u>Acroneuria pacifica</u>	15	
<u>Alloperla</u> sp.	11	
<u>Hastaperla brevis</u>	13	
<u>Isogenus</u> sp.	7	
<u>Isoperla</u> sp.	7	
<u>Nemoura cinctipes</u>	5	Total 58

TRICHOPTERA 30 0.3

<u>Arctopsyche grandis</u>	6	
<u>Hydropsyche</u> sp.	1	
<u>Hydroptila</u> sp.	1	
<u>Glossosoma</u> sp.	9	
<u>Rhyacophila vepulsa</u>	10	
<u>Limnephilidae</u>	3	Total 30

DIPTERA 54 0.1

<u>Simuliidae</u>	3	
<u>Dicranota</u> sp.	2	
<u>Antocha</u> sp.	6	
<u>Hexatoma</u> sp.	1	
<u>Pericoma</u> sp.*	49	
<u>Empididae</u> #1	16	
<u>Calopsectra</u> sp.	3	
<u>Hydrobaenus</u> sp. 2	4	
<u>Cricotopus</u> sp. (2) <u>Orthocladus</u> sp. 1	9	
<u>Metriocnemus</u> sp.	3	
<u>Brillia</u> sp.	1	Total 97

*Originally included with Coleoptera

COLEOPTERA 73 0.1

{ <u>Heterlimnius</u> sp. larvae	23 }	
{ <u>Heterlimnius</u> sp. adult	1 }	Total 24

✓ ANNELIDA 16 0.5

<u>Oligochaeta</u>	17	Total 17
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Identified and Counted by:

Original Total 618

Final Total 619

William R. Schell

POORMAN CREEK # 2

4/14/71

1 sq. ft. sample from left side of stream. L. Spence.

Ephemeroptera 661 1.3

D = 2.66836 DMIN = 6.56917E-2 = .0656917
DMAX = 3.32193 R = 0.280713

<u>Baetis parvus</u> type	291	
<u>Baetis</u> spp.	122	
<u>Cinygmula</u> sp.	113	
<u>Epeorus longimanus</u>	66	
<u>Rhithrogena</u> sp.	13	
<u>Paraleptophlebia</u> sp.	8	
<u>Ephemerella infrequens</u>	18	
<u>Ephemerella hystrix</u>	20	
<u>Ephemerella flavilinea</u>	25	
		Total ⁶⁷⁶ 675

Plecoptera 98 2.5

<u>Acroneuria pacifica</u>	46	
<u>Nemoura cinctipes</u>	20	
<u>Isoperla</u> sp.	11	D = 2.32858 DMIN = 0.21455
<u>Alloperla</u> sp.	7	DMAX = 2.82735 R = 0.187741
<u>Isogenus</u> sp.	6	
<u>Hastaperla brevis?</u>	1	
<u>Pteronarcella badia</u>	1	
		Total 92

Trichoptera 98 1.5

<u>Arctopsyche grandis</u>	54	
<u>Rhyacophila acropedes</u> or <u>vao</u>	23	D = 1.89477 DMIN = 0.25184
<u>Rhyacophila vepulsa</u>	4	DMAX = 3. R = 0.402171
<u>Glossosoma</u> sp.	18	
<u>Limnephilidae</u>	1	
		Total 100

Diptera 141 0.2

<u>Antocha</u> sp.	13	
<u>Dicranota</u> sp.	1	
<u>Pericoma</u> sp.	32	
<u>Simuliidae</u>	5	
<u>Empididae</u> , species #1	26	
<u>Empididae</u> , species #2	5	
<u>Empididae</u> , species #3	1	
<u>Hydrobaenus</u> sp. 1	16	
<u>Hydrobaenus</u> sp. 2	3	
<u>Hydrobaenus</u> sp. 4 } <u>Orthocladius</u>	15	
<u>Hydrobaenus</u> sp. 5 } <u>sp. 1</u>	2	
<u>Metriocnemus</u> sp.	9	
<u>Metriocnemus</u> sp. pupae	5	
<u>Brillia</u> sp.	6	
<u>Cardiocladius</u> sp.	1	

D = 3.18911 DMIN = 0.327395
DMAX = 4. R = 0.242577

Station D.I.

D = 4.28354 DMIN = 0.283731
DMAX = 5.49185 R = 0.28495

Diptera, cont.

<u>Calopsectra</u> sp.	5	
Unknown tendipedids	9	Total 154

Coleoptera 76 T

{	<u>Optioservus</u> sp. adults	2	}	Total 41
	<u>Optioservus</u> sp. larvae	3		
	<u>Heterlimnius corpulentus</u> larvae	36		

D = 1.03973 DMIN = 0.212677
DMAX = 2. B = 0.53727

✓ Annelida 19 0.9

Oligochaeta	17	Total 17
-------------	----	----------

Original Total 1093
Final Total ~~1079~~
1080

Identified & Counted by
PATRICIA ANN MITCHELL
M.S., Zoology, UNIV OF MONTANA
c/o DEPT. ZOOLOGY ENT.
IOWA STATE UNIV.
AMES, IOWA
Patricia Ann Mitchell

POORMAN CREEK #3

4/14/71

1 sq. ft. from center of stream. L. Spence.

EPHEMEROPTERA 567 0.8

<u>Baetis parvus</u> type (may be <u>tricaudatus</u>)	147	
<u>Baetis</u> spp.	173	
<u>Cinygmula</u> spp.	101	
<u>Epeorus longimanus</u>	59	
<u>Rhithrogena</u> sp.	5	
<u>Paraleptophlebia</u> sp.	8	
<u>Ephemerella infrequens</u>	15	
<u>Ephemerella hystrix</u>	27	
<u>Ephemerella</u> sp. prob. <u>flavilinea</u>	59	Total 594

PLECOPTERA 130 1.0

<u>Nemoura cinctipes</u>	44	
<u>Pteronarcella badia</u>	1	
<u>Isoperla</u> sp.	20	
<u>Isogenus</u> sp.	3	
<u>Alloperla</u> sp.	7	
<u>Hastaperla brevis</u> (probably)	4	
<u>Acroneuria pacifica</u>	36	Total 115

TRICHOPTERA 133 2.5

<u>Arctopsyche grandis</u>	80	
<u>Glossosoma</u> sp.	8	
<u>Brachycentrus</u> sp.	1	
<u>Rhyacophila acropedes</u> or <u>vao</u>	29	
<u>Rhyacophila vepulsa</u>	12	
<u>Limnephilidae</u>	3	Total 133

DIPTERA 163 0.1

<u>Antocha</u> sp.	15	
<u>Dicranota</u> sp.	1	
<u>Empididae</u> #1	39	
<u>Empididae</u> #2	1	
<u>Simuliidae</u>	5	
* <u>Pericoma</u> sp.	66	
<u>Calopsectra</u> sp.	18	
<u>Brillia</u> sp.	12	
<u>Hydrobaenus</u> sp. 2	1	
<u>Oricetopus</u> sp. <u>orthocladus</u> sp. 1	15	
<u>Metriocnemus</u> sp.	13	
<u>Hydrobaenus</u> sp. (slide 25) } <u>orthocladus</u>	8	}
<u>Hydrobaenus</u> sp. (slide 26) } sp. 1	11	
**Unknown Chironomidae (Tendipedidae)	16	Total 221

✓ ANNELIDA 7 0.5

COLEOPTERA <u>Oligochaeta</u>	9	Total 9
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* Originally counted with Coleoptera

COLEOPTERA 117 0.1

Heterlimnius corpulentus larvae
Brychius sp.

51
1

Total 52

✓ NEMATODA 1 T

Nematoda

1

Total 1

Original Total 1118

Final Total 1125

Identified and Counted by:

Patricia Ann Mitchell
MS, University of Montana, Zoology, 1968
May 2, 1972

Patricia Ann Mitchell

BLACKFOOT RIVER AT HOGUM CREEK BRIDGE #1

3/19/71

1 sq. ft. sample from left side of riffle above bridge. L. Spence. 1215

EPHEMEROPTERA 617 0.3

<u>Baetis parvus</u> type (prob. <u>tricaudatus</u>)	14	
<u>Baetis</u> sp.	121	
<u>Cinygmula</u> sp.	378	
<u>Rhithrogena</u> sp.	1	
<u>Epeorus longimanus</u>	28	
<u>Ephemerella infrequens</u>	42	
<u>Ephemerella</u> sp. prob. <u>flavilinea</u>	22	
<u>Paraleptophlebia</u> sp.	7	
<u>Ameletus</u> sp.	1	Total 614

PLECOPTERA 205 0.4

<u>Nemoura besametsa</u>	109	
<u>Nemoura cinctipes</u>	10	
<u>Capnia</u> sp.	38	
<u>Isogenus</u> sp.	3	
<u>Isoperla</u> sp.	2	
<u>Alloperla</u> sp.	37	
<u>Hastaperla brevis</u>	1	
<u>Aeroneuria pacifica</u>	1	
<u>Claassenia sabulosa</u>	1	Total 202

TRICHOPTERA 195 0.2

<u>Hydropsyche</u> sp.	46	
<u>Rhyacophila acropedes</u> or <u>vao</u>	33	
<u>Rhyacophila vepulsa</u>	1	
<u>Glossosoma</u> sp.	6	
<u>Brachycentrus</u> sp.	5	
<u>Lepidostoma</u> sp.	5	
<u>Limnephilidae</u>	3	Total 99

DIPTERA 153 0.2

<u>Antocha</u> sp.	20	
<u>Hexatoma</u> sp.	2	
<u>Dicranota</u> sp.	2	
<u>Simuliidae</u>	26	
<u>Empididae</u> #1	1	
<u>Empididae</u> #2	1	
<u>Empididae</u> #3	1	
<u>Pericoma</u> sp.	29	
<u>Brillia</u> sp.	5	
<u>Hydrobaenus</u> sp. 2	108	
<u>Cardiocladius</u> sp.	16	
<u>Hydrobaenus</u> sp. 3	32	
<u>Metriocnemus</u> sp.	8	
<u>Unknown Chironomidae</u>	34	Total 285

Original total 1229
Final total 1219

COLEOPTERA 59 0.1

<u>Optioservus</u> sp. larvae	12	
<u>Optioservus</u> sp. adult	1	
<u>Zaitzevia</u> sp. larvae	4	
<u>Zaitzevia</u> sp. adult	1	
<u>Heterlimnius</u> sp. larvae	1	Total 19

Larvae-1

BLACKFOOT RIVER AT HOGUM CREEK BRIDGE #2

3/19/71

1 sq. ft. from center of riffle above bridge. L. Spence

EPHEMEROPTERA 1123 0.6

D = 2.11887 DMIN = 4.67829E-2 = .0467829
DMAX = 3.45943 R = 0.395167

<u>Baetis parvus</u> type	63	
<u>Baetis</u> sp.	140	
<u>Paraleptophlebia</u> sp. prob. <u>heteronea</u>	35	
<u>Siphonuridae</u> prob. <u>Ameletus</u> sp.	2	
<u>Ephemerella infrequens</u>	198	
<u>Ephemerella</u> sp. prob. <u>flavilinea</u>	82	
<u>Ephemerella grandis ingens</u>	1	
<u>Cinygmula</u> sp.	509	
<u>Epeorus longimanus</u>	94	Total 1124

PLECOPTERA 450 1.0

<u>Nemoura besametsa</u>	183	
<u>Nemoura cinctipes</u>	45	
<u>Capnia</u> spp.	65	
<u>Alloperla</u> sp.	110	D = 2.20968 DMIN = 0.113794
<u>Chloroperlidae</u>	3	DMAX = 3.45943 R = 0.374107
<u>Isoperla</u> sp.	14	
<u>Isogenus</u> sp.	1	
<u>Claassenia sabulosa</u>	4	
<u>Acroneuria pacifica</u> (and/or small unknown)*	3	Total 428

TRICHOPTERA 1013 1.4

D = 1.74198 DMIN = 6.74341E-2 = .0674341
DMAX = 3.16993 R = 0.460258

<u>Hydropsyche</u> sp.	608	
<u>Arctopsyche grandis</u>	2	
<u>Brachycentrus</u> sp.	21	
<u>Glossosoma</u> sp.	191	
<u>Rhyacophila acropedes</u> or <u>vao</u>	39	
<u>Rhyacophila vephila</u>	1	
<u>Rhyacophila</u> sp.	1	
<u>Epidostoma</u> sp.	131	
<u>Limnephilidae</u>	7	
Pupae	10	Total 1011

DIPTERA 399 0.5

<u>Hexatoma</u> sp.	5	
<u>Antocha</u> sp.	19	
<u>Dicranota</u> sp.	1	
<u>Simuliidae</u>	19	
<u>Empididae</u> #1	3	
<u>Empididae</u> #2	1	
<u>Hydrobaenus</u> sp. 2	258	D = 2.59819 DMIN = 0.233208
<u>Cardiocladius</u> sp.	7	DMAX = 4.24793 R = 0.410923
<u>Brillia</u> sp. 1	35	
<u>Pentaneura</u> sp.	1	
<u>Brillia</u> sp. 2	2	
<u>Griecotopus</u> sp. <u>Orthocladus</u> sp. 1	1	
<u>Hydrobaenus</u> sp. 3	0	
<u>Metriocnemus</u> sp.	1	
<u>Calopsectra</u> sp.	1	
<u>Hydrobaenus</u> sp. 1	3	
Unknown <u>tandipodidae</u>	20	Total 474
<u>Pericoma</u> sp.	89	

* A. pacifica too small for certain identification

Station D.I.

D = 4.0083 DMIN = 0.120789
DMAX = 5.72793 R = 0.306635

COLLEOPTERA 142 0.1

D = 0.765387 DMIN = 0.213294
DMAX = 1.58496 R = 0.597561

{	Optioservus sp. adult	22	}	Total 51
	Optioservus sp. larvae	24		
{	Zaitzevia sp. adult	2	}	
	Zaitzevia sp. larvae	3		

✓ UNKNOWN 1

✓ COTTUS 2

ORIGINAL TOTAL 3130

FINAL TOTAL 3091

Identified and counted by:
 Patricia Ann Mitchell
 MS. University of Montana 1968
 April 13, 1972

BLACKFOOT RIVER AT HOGUM CREEK BRIDGE #3

3/19/71

1 sq. ft. sample from right side of fiffle above bridge. L. Spence. 1300

Ephemeroptera 998 0.4

<u>Baetis parvus</u> type (<u>tricaudatus?</u>)	12	
<u>Baetis</u> sp.	111	
<u>Cinygmula</u> sp.	574	
<u>Rhithrogena</u> sp.	2	
<u>Epeorus longimanus</u>	97	
<u>Ephemerella infrequens</u>	114	
<u>Ephemerella flavilinea</u>	49	
<u>Paraleptophlebia</u> sp. prob. <u>heteronea</u>	22	
<u>Ameletus</u> sp.	1	Total 1012

Plecoptera 358 1.0

<u>Nemoura besametsa</u>	113	
<u>Nemoura cinctipes</u>	41	
<u>Capnia</u> spp.	58	
<u>Alloperla</u> sp.	74	
<u>Hastaperla brevis</u>	4	
<u>Isoperla</u> sp.	24	
<u>Isogenus</u> sp.	5	
<u>Arcynopteryx parallela</u> or <u>curvata</u>	1	
<u>Acroneuria pacifica</u>	3	
<u>Claassenia sabulosa</u>	1	Total 324

Trichoptera 311 0.5

<u>Hydropsyche</u> sp.	195	
<u>Arctopsyche grandis</u>	1	
<u>Brachycentrus</u> sp.	8	
<u>Glossosoma</u> sp.	38	
<u>Rhyacophila acropedes</u> or <u>vao</u>	13	
<u>Lepidostoma</u> sp.	52	
<u>Limnephilidae</u>	5	
✓ Pupae	2	Total 314

Diptera 111 0.1

<u>Hexatoma</u> sp.	1	
<u>Antocha</u> sp.	3	
<u>Empididae</u> #2	2	
<u>Hydrobaenus</u> sp. 2	60	
<u>Cardiocladius</u> sp.	7	
<u>Brillia</u> sp.	24	
<u>Calopsectra</u> sp.	1	
<u>Pentaneura</u> sp.	2	
<u>Metrocnemus</u> sp.	1	
Unknown Chironomidae (Tendipedidae)	3	Total 104

*Coleoptera 52 0.1

<u>Heterlimnius</u> sp. larva	1	
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✓ Cottus

*Vial containing Coleoptera was missing from sample.

Original Total 1831
*Final Total 1756
1756

Identified & Counted
Patricia Ann
Mitchell

ALICE CREEK AT HIGHWAY 200 BRIDGE #1

3/19/71

1 sq. ft. sample from left side of riffle 50' above bridge. L. Spence. 1515

Ephemeroptera 280 .2

Baetis spp. 147
Cinygmula sp. 38
Ephemerella infrequens 41
Rhithrogena sp. 1
Epeorus longimanus 13
Paraleptophlebia sp. 3
Ephemerella sp. 21

D = 2.11523 DMIN = 0.101622
 DMAX = 3. R= 0.305263

Total 264

Trichoptera 159 0.5

Rhyacophila acropedes 10
Rhyacophila vepulsa 2
Hydropsyche sp. 103
Arctopsyche ~~sp.~~ 4 grandis
Glossosoma sp. 30
Limnephilidae 5
 ✓ Trichoptera pupa 1

D = 1.5996 DMIN = 0.1561
 DMAX = 3. R= 0.492422

Total 155

Plecoptera 145 0.2

Alloperla sp. 16
Capnia spp. 14
Nemoura cinctipes 4
Nemoura besametsa 95
Isogenus sp. 5

D = 1.49168 DMIN = 0.112932
 DMAX = 3. R= 0.522439

Total 134

Diptera 309 0.5

Cardiocladius sp. 24
Hydrobaenus sp. 1 69
Hydrobaenus sp. 2 5
Hydrobaenus sp. 3 74
Metriocnemus sp. 17
 ✓ Pupae - Hydrobaenus 4
Unknown Tendip. 24
Pericoma sp. 18
Antocha sp. 29
Simuliidae 3
Heleinae 3

D = 3.04267 DMIN = 0.226642
 DMAX = 3.80735 R= 0.213557

Total 270

Coleoptera 9 T

Heterlimnius sp. prob. corpulentus larvae 3
 { Optioservus sp. larvae 6 }
 { Optioservus sp. adults 4 }
Zaitzevia sp. larva 1

D = 1.06939 DMIN = 0.37314
 DMAX = 1.58496 R= 0.425456

Total 14

Station D.I.

Original Total 902

Final Total 836

837

D = 4.1217 DMIN = 0.2003
 DMAX = 5.35755 R= 0.239657

Sample #2 lost in Helena lab. 14

ALICE CREEK AT HIGHWAY 200 BRIDGE #3

3/19/71

1 sq. ft. sample from center of riffle 75' above bridge. L. Spence.

Ephemeroptera 565 1.1

Ephemerella infrequens 97
Ephemerella doddsi 9
Ephemerella sp. 2
✓ Ephemerella sp. too small to identify 29
Rhithrogena sp. 13
Epeorus longimanus 14
Cinygmula spp. 172
Baetis sp. 173
Paraleptophlebia sp. 14

Total 523

523

Plecoptera 525 1.0

Nemoura sp. prob. besametsa 335
Alloperla sp. 119
Capnia spp. 64
Nemoura cinctipes 12
Isogenus sp. 4
Brachyptera sp. 1
Acroneuria pacifica 1
Arcynopteryx parallela or curvata 1
✓ Unknown small plecoptera 3

Total 540

540

Trichoptera 320 0.6

Hydropsyche sp. 204
Glossosoma sp. 51
Brachycentrus sp. 20
Rhyacophila acropedes 16
Limnephilidae (small, reddish flat head) 7
✓ Trichopteran pupae 5
Arctopsyche ^{gracilis} 5
Rhyacophila vepulsa 3
Psychoronia sp. 1

Total 312

312

Diptera 396 1.5

Cardiocladius sp. 62
Hydrobaenus sp. 1 63
Hydrobaenus sp. 2 20
Hydrobaenus sp. 3 49
Metriocnemus sp. 36
{ Diamesa sp. larvae 6 }
{ Diamesa sp. pupae 5 }
Brillia sp. 1
Pentaneura sp. 1
Other Tendipedidae 26

347

Coleoptera 5 T

{ Optioservus sp. adults
Optioservus sp. larvae
Heterlimnius sp. larvae
Zaitzevia sp. larvae 1

Total 21

Oligochaeta 1 T

Total 1

Pericoma sp. 45
Antocha sp. 29
Hexatoma sp. 2
Simuliidae 2

Total 347

Original total 1812

Final total ~~1713~~

1744

BLACKFOOT RIVER AT FLESHER PASS ROAD BRIDGE #1

3/19/71

1 sq. ft. sample from middle of riffle above culvert. L. Spence. 1400

Ephemeroptera 99 .1

Baetis sp. -43
Epeorus longimanus -18
Cinygmula sp. -25

D = 1.32395 DMIN = 0.102938
DMAX = 1.58496 R= 0.176014

Total 86

Plecoptera 186 .4

Nemoura sp. prob. besametsa -66
Capnia spp. -11
Arcynopteryx parallela -1
Acroneuria pacifica -2
Alloperla sp. -46
Nemoura cinctipes -17
Isogenus sp. -8
Paraperla frontalis -2
Eucapnopsis brevicauda -5
Brachyptera sp. -1
✓ Unknown Plecoptera -2

D = 2.23047 DMIN = 0.235199
DMAX = 3.45943 R= 0.381163

Total 161

Trichoptera 36 .1

Rhyacophila acropedes -1
Hydropsyche sp. -24
Arctopsyche ^{gracilis} -2
Brachycentrus sp. -10

D = 1.66666 DMIN = 0.549689
DMAX = 2.58496 R= 0.451194

Total 37

Diptera 203 .2

Cardiocladius sp. -3
Hydrobaenus sp. 1 -7
Hydrobaenus sp. 3 -97
Brillia sp. -9
Calopsectra sp. -1
Metriocnemus sp. -1
Pericoma sp. -14
Simuliidae -33
Empididae -2
Antocha sp. -14
Hexatoma sp. -1

D = 2.15584 DMIN = 0.284755
DMAX = 3.58496 R= 0.433041

Total 182

Original Total 524
Final Total 466

station D.I.

D = 3.75355 DMIN = 0.334928
DMAX = 5. R= 0.266117

BLACKFOOT RIVER AT FLESHER PASS ROAD BRIDGE #2

3/19/71

1 sq. ft. sample from center of riffle 50' above culvert. L. Spence.

Ephemeroptera 29 T

<u>Baetis</u> spp.	17	
<u>Epeorus longimanus</u>	2	
<u>Cinygmula</u> sp.	2	Total 21

Plecoptera 62 0.2

<u>Nemoura</u> sp. prob. <u>besametsa</u>	30	
<u>Nemoura cinctipes</u>	12	
<u>Alloperla</u> sp.	11	
<u>Capnia</u> spp.	7	
<u>Isogenus</u> sp.	1	
<u>Claassenia sabulosa</u>	1	
<u>Eucapnopsis brevicauda</u>	1	
<u>Brachyptera</u> sp.	1	Total 64

Trichoptera 8 T

<u>Hydropsyche</u> sp.	5	
<u>Brachycentrus</u> sp.	2	
<u>Limnephilidae</u>	1	Total 8

Diptera 111 0.1

<u>Hydrobaenus</u> sp. 3	14	
<u>Brillia</u> sp.	3	
✓ <u>Hydrobaenus</u> -type unknown	1	
✓ <u>Brillia</u> -type unknown	1	
<u>Antocha</u> sp.	11	
<u>Simuliidae</u>	79	Total 109

Original total 210
Final Total 202

BLACKFOOT RIVER AT FLESHER PASS ROAD BRIDGE #3

3-19-71

1 sq. ft. sample from center of riffle, 75 ft. above culvert. L. Spence.

Ephemeroptera 88 0.1

Cinygmula sp. 16

Baetis spp. 47

Speorus longimanus 4

Total 67

Plecoptera 189 0.5

Arcynopteryx paralella or curvata 2

Nemoura cinctipes 20

Nemoura sp. prob. besametsa 103

Alloperla sp. 47

Isogenus sp. 10

Capnia spp. 20

Brachyptera sp. 2

Olaassenia sabulosa 1

Acroneuria pacifica 1

Eucapnopsis brevicauda? 4

✓ Unknown small plecopteran 1

Total 211

Trichoptera 25 0.2

Brachycentrus sp. 8

Rhyacophila acropedes 3

Hydropsyche sp. 9

Arctopsyche ~~sp.~~ grandis 1

Glossosoma sp. 1

Limnephilidae 1

Total 23

Diptera 105 0.1

Antocha sp. 12

Pericoma sp. 10

Hydrobaenus sp. 3 46

Hydrobaenus sp. 1 1

Brillia sp. 9

Dicranota sp. 1

Simuliidae 19

98

Total ~~99~~

Original Total 407

Final Total ~~407~~

399

August 1971 Bug Samples sent to Bat Mitchell

on Oct. 20, 1972
Reg no. 678

Station

Sample #
vials

2

3

4

Canyon

X (6)

X (5)

X (5)

Dalton

X (8)

X (7)

X (5)

Poor man

X (P)

X (8)

X (8)

Below hands

X (6)

X (6)

X (7)

Hogum

X (7)

X (7)

X (8)

Alice @ zoo

X (8) (6)

X (6)

X (8) (8)

(X) (X) 4 safe SAMPLE

Flesher

X (6)

X (5)

X (5)

Pops

X (4)

X (4)

X (3)

Rambow

none

X (1)

X (1)

X (6)

Alice @ NF

(55)

(52)

(55)

May have had one extra Alice Creek

162 vials

Samples of March 1971

Blackfoot @ received

~~D.H.~~ Canyon ^{OK 6-6-72} #2^x, #3^x

Dalton #1^x, #2^x, #3^x

Hoquum ^{OK} #2 ^{OK}

Flesher #1^x #2^x #3^x

Alice C. #1^x #3^x
(#2 lost)

Poolman C. ^{OK} #2 ^{OK}

Ident. Cost of 1st 7 Samples = $\$300.00 = \$42.50 / \text{Sample}$
Ident. Cost of next 5 Samples = $150.00 = 30.00 / \text{Sample}$
Avg = $37.50 / \text{Sample}$
Total cost for 17 Samples = $\$535 = \$31.47 / \text{sq ft}$

- = Samples^{sheets} not received as
of 5-3-72

All Samples^{sheets} received as of
6-6-72 ^{OK}

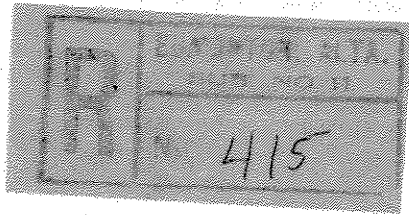
Data Sheets Enclosed (6):

Alice Creek at Highway 200 #1, 2, 3, 4
Blackfoot R. at Hogum Cr. Bridge - #1
Blackfoot R. between Lander's Fork & Lincoln #3

from Pat Mitchell
Received January 19, 1973.

Registered no. 415. Signed for by
Orinda H. Spencer

U,



\$26⁰⁰ / 50.54

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #1

8-20-71

1 sq. ft. with round sampler

L. Spence

EPHEMEROPTERA 186 0.1

D = 1.15179 DMIN = 7.28360E-2 = .0728360
DMAX = 2.58496 R = 0.570503

<u>Baetis</u> spp.	60	
<u>Rhithrogena</u> sp.	112	
<u>Ephemerella tibialis</u>	11	
<u>Paraleptophlebia</u> sp.	1	Total 184

PLECOPTERA 28 0.1

<u>Acroneuria pacifica</u>	2	
<u>Arcynopteryx parallela</u> or <u>curvata</u>	10	
<u>Nemoura cinctipes</u>	2	
<u>Paraperla frontalis</u>	1	
<u>Alloperla</u> sp.	13	Total 28

D = 1.97392 DMIN = 0.814212
DMAX = 2.80735 R = 0.418152

TRICHOPTERA 9 T

<u>Brachycentrus</u> sp.	2	
<u>Hydropsyche</u> sp.	1	
<u>Arctopsyche grandis</u>	4	
<u>Tinodes</u> sp.	1	
Limnephilid Genus 1	1	Total 9

D = 2.03009 DMIN = 1.44251
DMAX = 2.58496 R = 0.485637

DIPTERA 42 0.1

<u>Hexatoma</u> sp.	33	
<u>Empididae</u> Genus #1	1	
<u>Empididae</u> Genus #2	1	
<u>Atherix variegata</u>	2	
<u>Tanytarsus</u> sp.	4	
<u>Brillia</u> sp.	2	
Unknown Chironomidae	3	Total 46

D = 2.04914 DMIN = 0.591439
DMAX = 3. R = 0.394785

COLEOPTERA 1 T

<u>Optioservus</u> sp. larva	1	Total 1
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S=1 No diversity computed

✓ NEMATODES 28 T

<u>Oligonchaetes</u>	23	Total 23
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Original Total 294 Final Total 291

Identified and Enumerated by
 Patricia Ann Mitchell
 MS, University of Montana 1968
 May 27, 1973

Patricia Ann Mitchell

station D.I.

D = 2.24571 DMIN = 0.330032
DMAX = 4.80735 R = 0.572137

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #2

8-20-71

1 sq. ft. from center of riffle

L. Spence

EPHEMEROPTERA 370 0.2

<u>Baetis</u> spp.	127	
<u>Rhithrogena</u> sp.	236	
<u>Ephemerella</u> <u>tibialis</u>	3	
<u>Ephemerella</u> <u>grandis</u>	1	Total 367

PLECOPTERA 16 T

<u>Nemoura</u> <u>cinctipes</u>	1	
<u>Alloperla</u> sp.	11	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	1	
<u>Acroneuria</u> <u>pacifica</u>	1	Total 14

TRICHOPTERA 6 T

<u>Glossosoma</u> sp.	4	
<u>Arctopsyche</u> <u>grandis</u>	2	Total 6

DIPTERA 32 0.1

<u>Hexatoma</u> spp.	13	
<u>Atherix</u> <u>variegata</u>	5	
<u>Empididae</u> Genus #2	1	
<u>Simuliidae</u>	4	
<u>Chironomidae</u> unknowns	7	Total 30

COLEOPTERA 1 T

<u>Optioservus</u> sp. adult	1	Total 1
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Original Total 425 Final Total 418

Identified and Enumerated by
 Patricia Ann Mitchell
 University of Alberta, Edmonton
 May 28, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #3

8-20-71

1 sq. ft. from left side of riffle

L. Spence

EPHEMEROPTERA 202 0.1

<u>Baetis</u> spp.	111	
<u>Rhithrogena</u> sp.	89	
<u>Ephemerella tibialis</u>	2	
<u>Ephemerella doddsi</u>	1	
<u>Paraleptobhlebia</u> sp.	1	Total 204

PLECOPTERA 11 0.2

<u>Pteronarcella badia</u>	3	
<u>Alloperla</u> sp.	4	
<u>Claassenia sabulosa</u>	1	
<u>Acroneuria pacifica</u>	2	Total 10

TRICHOPTERA 4 T

<u>Arctopsyche grandis</u>	3	
<u>Glossosoma</u> sp.	1	Total 4

DIPTERA 18 0.3

<u>Atherix variegata</u>	8	
Chironomidae unknowns	3	
<u>Hexatoma</u> spp.	5	
Simuliidae	2	Total 18

✓ NEMATODA 5 T

Nematoda	1	
Oligochaeta	2	Total 3
plus 2 chironomid sand tubes		

Original Total 240 Final Total 239

Identified and Enumerated by
 Patricia Ann Mitchell
 University of Alberta, Edmonton
 May 28, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE #1

8-20-71

1 sq. ft. left bank

L. Spence

EPHEMEROPTERA 180 0.2

Baetis spp.
Rhithrogena sp.
Epeorus deceptivus
Ephemerella doddsi
Ephemerella grandis

154
 17
 1
 4
 5

D = 1.34794 DMIN = 0.100447
 DMAX = 2.80735 R= 0.539147

Total 181

PLECOPTERA 4 T

Isogenus sp.
Alloperla sp.
Paraperla frontalis

1
 1
 2

D = 2.02229 DMIN = 0.850178
 DMAX = 2.58496 R= 0.324346

Total 4

TRICHOPTERA 59 T

Glossosoma sp.
Tinodes sp.
Arctopsyche grandis
Brachycentrus sp.
Limnephilid Genus 1

33
 2
 4
 19
 1

D = 1.92379 DMIN = 0.215031
 DMAX = 2.58496 R= 0.273985

Total 59

DIPTERA 111 0.2

Atherix variegata
Simuliidae
 Unknown Chironomidae
Tipulidae

8
 99
 4
 2

D = 1.74933 DMIN = 0.279371
 DMAX = 3.45943 R= 0.537758

Total 113

COLEOPTERA 2 T

Zaitzevia sp. adult
Optioservus sp. larva

1
 1

D = 1.34886 DMIN = 0.644193
 DMAX = 2.32193 R= 0.579989

Total 2

✓ NEMATODES 2 T

None

✓ Cottus sp.

1

Total 1

Original Total 359

Final Total 360

Identified and Enumerated by
 Patricia Ann Mitchell
 University of Alberta, Edmonton
 May 23, 1973

Patricia Ann Mitchell

station D.I.

D = 3.32831 DMIN = 0.309655
 DMAX = 5.12928 R= 0.373675

BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE #2

8-20-71

1 sq. ft. right bank

L. Spence

EPHIMEROPTERA 220 0.1

<u>Baetis</u> spp.	147	
<u>Cinygmula</u> sp.	5	
<u>Rhithrogena</u> sp.	47	
<u>Ephemerella tibialis</u>	6	
<u>Ephemerella grandis</u>	12	
<u>Ephemerella doddsi</u>	5	Total 222

PLECOPTERA 21 T

<u>Alloperla</u> sp.	9	
<u>Pteronarcella badia</u>	6	
<u>Nemoura cinetipes</u>	1	
<u>Acroneuria pacifica</u>	1	Total 17

TRICHOPTERA 103 0.1

<u>Brachycentrus</u> sp.	60	
<u>Glossosoma</u> sp.	12	
<u>Arctopsyche grandis</u>	17	
<u>Limnephilid</u> Genus 1	1	
<u>Limnephilid</u> Genus 2	4	
<u>Tinodes</u> sp.	7	Total 101

DIPTERA 68 0.1

<u>Atherix variegata</u>	3	
<u>Hexatoma</u> sp.	1	
<u>Simuliidae</u>	5	
<u>Empididae</u> Genus #1	4	
<u>Empididae</u> Genus #2	1	
<u>Metriocnemius</u> sp.	14	
<u>Cardiocladius</u> sp.	1	
<u>Tanytarsus</u> sp. (= <u>Calopsectra</u>)	2	
<u>Brillia</u> sp.	1	
Unkown Chironomidae	32	Total 64

COLEOPTERA 22 T

<u>Narpus</u> sp. larva	1	
<u>Heterlimnius</u> sp. larva	1	
<u>Optioservus</u> sp. lar-12, ad-3	15	
<u>Cleptelmis ornata</u> lar-4, ad-1	5	Total 22

✓ NEMATODES 38 T

<u>Oligonchaeta</u>	38	Total 38
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Original Total 472, Final Total ⁴⁶⁴~~463~~

Enumerated and Identified by
 Patricia Ann Mitchell
 MS, Univ. Montana, 1968
 University of Alberta, Edmonton
 May 26, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE #3
8-20-71

1 sq. ft. right bank

L. Spence

EPHEMEROPTERA 242 0.2

<u>Baetis</u> spp.	146	
<u>Rhithrogena</u> sp.	68	
<u>Cinygmula</u> sp.	1	
<u>Ephemerella</u> <u>doddsi</u>	7	
<u>Ephemerella</u> <u>tibialis</u>	4	
<u>Ephemerella</u> <u>grandis</u>	14	Total 240

PLECOPTERA 16 T

<u>Pteronarcella</u> <u>badia</u>	6	
<u>Alloperla</u> sp.	7	
<u>Nemoura</u> <u>cinctipes</u>	2	
<u>Acroneuria</u> <u>pacifica</u>	3	Total 18

TRICHOPTERA 53 T

<u>Brachycentrus</u> sp.	27	
<u>Glossosoma</u> sp.	8	
<u>Arctopsyche</u> <u>grandis</u>	8	
Limnephilid Genus 1	3	
Limnephilid Genus 2	3	
<u>Tinodes</u> sp.	4	Total 53

DIPTERA 198 0.2

<u>Atherix</u> <u>variegata</u>	9	
Simuliidae	118	
Empididae #1	2	
<u>Cardiocladius</u> sp.	3	
<u>Metriocnemius</u> sp.	16	
<u>Tanytarsus</u> sp.	1	
Unknown Chironomidae	28	Total 177

COLEOPTERA 21 T

<u>Cleptelmis</u> <u>ornata</u> lar-4, ad-1	5	
<u>Heterlimnius</u> sp. ad.	1	
<u>Optioservus</u> sp. lar-9, ad-3	12	Total 18
and 3 empty exuviae		

✓ OLIGOCHAETA

Oligochaetes	19	Total 19
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Original Total 530, Final Total 525

Identified and Enumerated by
Patricia Ann Mitchell
University of Alberta, Edmonton
May 26, 1973

Patricia Ann Mitchell

POORMAN CREEK #1
8-23-71
L. Spence 1 sq. ft.

EPHEMEROPTERA 353 0.2 cc

<u>Baetis</u> spp.	175
<u>Cinygmula</u> sp.	139
<u>Rhithrogena</u> sp.	6
<u>Epeorus</u> <u>deceptivus</u>	8
<u>Epeorus</u> <u>longimanus</u>	4
<u>Ephemerella</u> <u>doddsi</u>	2
<u>Ephemerella</u> <u>hystrix</u>	6
<u>Ephemerella</u> <u>grandis</u>	1
<u>Paraleptophlebia</u> sp.	4

D = 1.87855 DMIN = 0.109735
DMAX = 3.32193 R= 0.449342

Total 345

PLECOPTERA 159 0.9 cc

<u>Nemoura</u> <u>cinctipes</u>	135
<u>Acroneuria</u> <u>pacifica</u>	14
<u>Alloperla</u> sp.	3
<u>Eucapnopsis</u> <u>brevicauda</u> (probably)	9

D = 1.05558 DMIN = 0.104372
DMAX = 2.58496 R= 0.61654

Total 161

TRICHOPTERA 86 T

<u>Arctopsyche</u> <u>grandis</u>	41
<u>Tinodes</u> sp. (Psychomyiidae)	36
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	4
<u>Rhyacophila</u> sp.	1
<u>Glossosoma</u> sp.	1
✓ Pupa	1

D = 1.83205 DMIN = 0.256927
DMAX = 2.80735 R= 0.382409

Total 84

DIPTERA 290 0.1 cc

Simuliidae	110
Empididae Genus 1	2
<u>Pericoma</u> sp.	14
<u>Orthocladius</u> sp. 2	18
<u>Tanytarsus</u> sp.	7
<u>Cardiocladius</u> sp.	2
<u>Brillia</u> sp.	69
<u>Metriocnemius</u> sp.	21
Unknown Chironomidae	62

D = 1.61119 DMIN = 7.85301E-2 = .0785301
DMAX = 3.70044 R= 0.576836

Total 305

COLEOPTERA 38 T

<u>Heterlimnius</u> sp. larvae 14, adults 2	16
<u>Optioservus</u> sp. larvae 2, adults 3	5
<u>Zaitzevia</u> sp. larvae 1	1
<u>Brychius</u> sp. (Haliplidae) larvae	3

D = 1.39899 DMIN = 0.389134
DMAX = 2.80735 R= 0.582398

Total 25

✓ ANNELIDA 6 T

Oligonchaeta	14
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Total 14

Original Total 932 Final Total 934

Identified and Enumerated by
Patricia Ann Mitchell
University of Alberta
March 19, 1973

Station D.I.

Patricia Ann Mitchell

D = 3.40673 DMIN = 0.152673
DMAX = 5.42626 R= 0.382952

POORMAN CREEK #2
8-23-71
L. Spence 1 sq. ft.

EPHEMEROPTERA 281 0.2 cc

<u>Baetis</u> spp.	145	
<u>Cinygmula</u> sp.	55	
<u>Rhithrogena</u> sp.	36	
<u>Epeorus</u> <u>deceptivus</u>	7	
<u>Epeorus</u> <u>longimanus</u>	7	
<u>Ephemerella</u> <u>doddsi</u>	3	
<u>Ephemerella</u> <u>hystrix</u>	6	
<u>Ephemerella</u> <u>grandis</u>	1	
<u>Ephemerella</u> <u>tibialis</u>	1	
<u>Paraleptophlebia</u> sp.	4	Total 265

PLECOPTERA 64 T

<u>Nemoura</u> <u>cinctipes</u>	53	
<u>Alloperla</u> sp.	12	
<u>Acroneuria</u> <u>pacifica</u>	10	
<u>Eucapnopsis</u> <u>brevicauda</u> (probably)	1	Total 76

TRICHOPTERA 60 0.4 cc

<u>Arctopsyche</u> <u>grandis</u>	38	
<u>Tinodes</u> sp.	10	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	2	
<u>Rhyacophila</u> sp.	8	
<u>Glossosoma</u> sp.	2	Total 60

DIPTERA 1065 0.8 cc

<u>Antocha</u> sp.	1	
Simuliidae	989	
Empididae Genus 1	8	
<u>Orthocladius</u> sp. 2	1	
<u>Cardiocladius</u> sp.	1	
<u>Brillia</u> sp.	21	
<u>Metriocnemus</u> sp.	8	
Unknown Chironomidae	29	
<u>Pericoma</u> sp.	1	Total 1059

COLEOPTERA 31 T

<u>Heterlimnius</u> sp.	29	
<u>Narpus</u> <u>concolor</u>	2	Total 31

✓ ANNELIDA 13 T

Oligochaeta	13	Total 13
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Original Total 1514 Final Total 1504

Enumerated and Identified by
Patricia Ann Mitchell
University of Alberta, Edmonton
March 20, 1973

Patricia Ann Mitchell

POORMAN CREEK #3

8-23-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 342 0.2 cc

<u>Baetis</u> spp.	187	
<u>Cinygmula</u> sp.	64	
<u>Epeorus</u> <u>deceptivus</u>	4	
<u>Epeorus</u> <u>longimanus</u>	3	
<u>Rhithrogena</u> sp.	18	
<u>Paraleptophlebia</u> sp.	6	
<u>Ephemerella</u> <u>doddsi</u>	3	
<u>Ephemerella</u> <u>grandis</u>	7	
<u>Ephemerella</u> <u>tibialis</u>	5	
<u>Ephemerella</u> <u>hystrix</u>	19	Total 316

PLECOPTERA 234 0.5 cc

<u>Pteronarcella</u> sp.	2	
<u>Acroneuria</u> <u>pacifica</u>	34	
<u>Nemoura</u> <u>cinctipes</u>	208	
<u>Alloperla</u> sp.	13	
<u>Isogenus</u> sp.	3	
<u>Eucapnopsis</u> <u>brevicauda</u> ?	1	Total 261

TRICHOPTERA 78 0.3 cc

<u>Rhyacophila</u> sp.	6	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	8	
<u>Arctopsyche</u> <u>grandis</u>	23	
<u>Tinodes</u> sp.	27	
<u>Limnephilidae</u> Genus 2	6	
<u>Hydroptilidae</u>	1	
✓ pupae	2	Total 73

DIPTERA 516 0.2 cc

<u>Simuliidae</u>	200	
<u>Empididae</u> Genus #1	20	
<u>Empididae</u> Genus #2	3	
<u>Empididae</u> Genus #3	1	
<u>Antocha</u> sp.	1	
<u>Pericoma</u> sp.	9	
<u>Orthocladius</u> sp. 2	20	
<u>Brillia</u> sp.	67	
<u>Metriocnemius</u> sp.	26	
<u>Tanytarsus</u> sp.	8	
<u>Cardiocladius</u> sp.	2	
<u>Pentaneura</u> sp.	1	
Unknown Chironomidae	160	Total 518

COLEOPTERA 74 T

<u>Narpus</u> sp. larvae	9	
<u>Optioservus</u> sp. lar-3, ad-3	6	
<u>Zaitzevia</u> sp. adult	1	
<u>Heterlimnius</u> sp. ad-2, lar-50	52	
<u>Brychius</u> sp.	3	Total 71

✓ ANNELIDA 6 T

<u>Oligochaeta</u>	16	Total 16
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Original Total 1250

Final Total 1255

Platania 10 No. 4 L. 100 10-11-71

BLACKFOOT RIVER BETWEEN LANDER'S FORK AND LINCOLN #1

8-23-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 469 1.4

D = 2.2671 DMIN = 9.73545E-2 = .0973545
DMAX = 3.45943 R= 0.35464

<u>Baetis</u> sp.	88	
<u>Cinygmula</u> sp.	41	
<u>Epeorus</u> <u>deceptivus</u>	50	
<u>Ephemerella</u> <u>doddsi</u>	96	
<u>Ephemerella</u> <u>coloradensis</u>	8	
<u>Ephemerella</u> <u>tibialis</u>	26	
<u>Ephemerella</u> <u>infrequens</u>	2	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	1	
<u>Ephemerella</u> <u>hystrix</u>	1	
<u>Rhithrogena</u> sp.	151	Total 464

PLECOPTERA 54 0.1

<u>Nemoura</u> <u>cinctipes</u>	3	
<u>Pteronarcella</u> <u>badia</u>	4	
<u>Capnia</u> sp. ?	1	D = 1.29781 DMIN = 0.386699
<u>Acronuria</u> <u>pacifica</u>	4	DMAX = 3.16993 R= 0.672641
<u>Claassenia</u> <u>sabulosa</u>	1	
<u>Alloperla</u> sp.	33	
<u>Perlodidae</u> (too small)	5	
<u>Isogenus</u> sp.	3	Total 54

TRICHOPTERA 118 0.8

<u>Rhyacophila</u> <u>acropedes</u>	2	
<u>Glossosoma</u> sp.	40	D = 1.75282 DMIN = 0.23529
<u>Brachycentrus</u> sp.	7	DMAX = 3. R= 0.451109
<u>Arctopsyche</u> <u>grandis</u>	52	
<u>Tinodes</u> sp.	14	
✓ Pupae	4	Total 119

DIPTERA 65 0.1

<u>Hexatoma</u> sp.	2	
<u>Empididae</u> #2	1	
<u>Pericoma</u> sp.	1	
<u>Simuliidae</u>	2	D = 2.66771 DMIN = 0.681362
<u>Cardiocladius</u> sp.	24	DMAX = 3.45943 R= 0.284988
<u>Metriocnemius</u> sp.	3	
<u>Tanytarsus</u> sp.	12	
<u>Brillia</u> sp.	3	
Unknown Chironomidae	15	Total 63

COLEOPTERA 9 T

<u>Optioservus</u> sp. lar-1, ad-8	9	S=1 No diversity Computed
		Total 9

Original Total 715, Final Total 709

Enumerated and Identified by
 Patricia Ann Mitchell
 April 30, 1973

Patricia Ann Mitchell

Station D.I.

D = 3.57208 DMIN = 0.264182
DMAX = 5.32193 R= 0.346369

BLACKFOOT RIVER BETWEEN LANDER'S FORK AND LINCOLN #2
8-23-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 300 0.4

<u>Baetis</u> sp.	50	
<u>Cinygmula</u> sp.	6	
<u>Rhithrogena</u> sp.	116	
<u>Epeorus longimanus</u>	2	
<u>Epeorus deceptivus</u>	31	
<u>Ephemerella doddsi</u>	74	
<u>Ephemerella tibialis</u>	7	
<u>Ephemerella coloradensis</u>	3	
<u>Ephemerella infrequens</u>	1	
<u>Ephemerella grandis</u>	1	Total 291

PLECOPTERA 62 0.1

<u>Nemoura cinctipes</u>	3	
<u>Pteronarcella badia</u>	4	
<u>Auroneuria pacifica</u>	2	
<u>Arcynopteryx</u> sp.	1	
<u>Alloperla</u> sp.	51	Total 61

TRICHOPTERA 68 0.2

<u>Glossosoma</u> sp.	27	
<u>Rhyacophila acropedes</u>	3	
<u>Brachycentrus</u> sp.	1	
<u>Tinodes</u> sp.	5	
<u>Arctopsyche grandis</u>	24	
✓ Pupae	4	Total 64

DIPTERA 23 T.

<u>Simuliidae</u>	12	
<u>Hexatoma</u> sp.	1	
<u>Cardiocladius</u> sp.	6	
<u>Brillia</u> sp.	1	
<u>Metriocnemius</u> sp.	2	
<u>Unknown Chironomidae</u>	3	Total 25

COLEOPTERA 3 T

<u>Optioservus</u> sp. adults	3	Total 3
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Original Total 456 Final Total 444

Identified and Enumerated by
Patricia Ann Mitchell
MS, Univ. of Montana, 1968
April 30, 1973

Patricia Ann Mitchell

Blackfoot River between Lander's Fork and Lincoln #3

8-23-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 456 0.3

<u>Baetis</u> spp.	60	
<u>Cinygmula</u> sp.	5	
<u>Rhithrogena</u> sp.	246	
<u>Ephemerella</u> <u>doddsi</u>	93	
<u>Ephemerella</u> <u>coloradensis</u>	3	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	5	
<u>Ephemerella</u> <u>tibialis</u>	5	
<u>Ephemerella</u> <u>infrequens</u>	1	
<u>Epeorus</u> <u>deceptivus</u>	25	Total 443

PLECOPTERA 68 0.1

<u>Alloperla</u> sp.	61	
<u>Pteronarcella</u> <u>badia</u>	3	
<u>Acroneuria</u> <u>pacifica</u>	1	
✓ <u>Acroneuria</u> sp.? (too small)	2	
<u>Nemoura</u> <u>cinctipes</u>	5	Total 72

TRICHOPTERA 116 0.3

<u>Arctopsyche</u> <u>grandis</u>	26	
<u>Hydropsyche</u> sp.	5	
<u>Glossosoma</u> sp.	73	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	1	
<u>Brachycentrus</u> sp.	3	
<u>Limnephilidae</u>	1	
Unknown - <u>Psychomiidae</u> ?	1	
✓ Pupae	4	Total 114

DIPTERA 39 0.3

<u>Hexatoma</u> sp.	5	
<u>Simuliidae</u>	1	
<u>Muscidae</u> larva?	1	
<u>Cardiocladius</u> sp.	17	
<u>Tanytarsus</u> sp.	5	
<u>Brillia</u> sp.	1	
<u>Metriocnemius</u> sp.	1	
<u>Orthocladius</u> sp. 1 (= <u>Hydrobaenus</u>)	3	Total 34

COLEOPTERA 6 T

<u>Optiosephus</u> sp.	6	Total 6
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✓ NEMATODA 3 T

Nematoda	3	Total 3
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Original Total 688

Final Total 672

Blackfoot River at Hogum Creek Bridge #1
8-23-71

1 sq. ft.

L. Spence

			D = 1.77145 DMIN = 0.116373	
			DMAX = 3.16993 R= 0.457982	
EPHEMEROPTERA	314	0.1		
<u>Cinygmula</u> sp.			179	
<u>Baetis</u> spp.			71	
<u>Rhithrogena</u> sp.			2	
<u>Ephemerella grandis ingens</u>			4	
<u>Ephemerella infrequens</u>			46	
<u>Ephemerella tibialis</u>			2	
<u>Paraleptophlebia</u> sp.			9	Total 313

			D = 1.32418 DMIN = 0.128098	
			DMAX = 3. R= 0.583522	
PLECOPTERA	159	0.7		
<u>Nemoura cinctipes</u>			78	
<u>Alloperla</u> sp.			107	
<u>Glaassenia sabulosa</u>			9	
<u>Acroneuria pacifica</u>			3	
<u>Acroneuria</u> sp. (small)			2	Total 199

			D = 1.26725 DMIN = 6.13806E-2 = .0613806	
			DMAX = 3.58496 R= 0.657772	
TRICHOPTERA	692	1.3		
<u>Hydropsyche</u> sp.			448	
<u>Arctopsyche grandis</u>			22	
<u>Brachycentrus</u> sp.			122	
<u>Glossosoma</u> sp.			16	
<u>Anagapetus</u> sp.			1	
<u>Rhyacophila acropedes</u>			3	
✓ <u>Rhyacophila</u> sp. (small)			2	
<u>Lepidostoma</u> sp.			11	
<u>Limnephilidae</u>			37	
<u>Chimarra</u> sp. (or <u>Sortosa</u> ?)			1	
✓ Pupae			4	Total 667

			D = 3.00112 DMIN = 0.213305	
			DMAX = 3.58496 R= 0.173161	
DIPTERA	137	0.1		
<u>Chironomidae</u>				
<u>Tanytarsus</u> sp. (= <u>Calopsectra</u>)			58	
<u>Orthocladus</u> sp. 2 (= <u>Hydrobaenus</u>) in <u>Nostoc</u>			9	
<u>Cardiocladius</u> sp.			3	
<u>Metriocnemus</u> sp.			17	
<u>Brillia</u> sp.			11	
<u>Orthocladus</u> sp. 1			5	
<u>Hexatoma</u> sp.			2	
<u>Simuliidae</u>			14	
<u>Pericoma</u> sp.			10	Total 129

			D = 1.40538 DMIN = 0.128727	
			DMAX = 2.58496 R= 0.480241	
COLEOPTERA	208	0.1		
<u>Optiosestus</u> sp.			84	
<u>Heterlimnius</u> sp.			3	
<u>Zaitzevia</u> sp.			95	
<u>Narpus</u> sp.			6	Total 188

✓ Oligochaete 1 Total 1

Station D.I.

Original Total 1510
Final Total 1497

D = 3.56244 DMIN = 0.136123
DMAX = 5.55459 R= 0.367794

BLACKFOOT RIVER AT HODUM ORLEX BRIDGE #2
8-23-71

1 sq. ft.

E. Spence

EPHEMEROPTERA 268 0.1

<u>Baetis</u> spp.	72	
<u>Cinygmula</u> sp.	144	
<u>Ephemerella infrequens</u>	36	
<u>Ephemerella doddsi</u>	1	
<u>Ephemerella grandis ingens</u>	5	
<u>Ephemerella tibialis</u>	1	261
<u>Ephemerella hystrix</u>	2	Total 259

PLECOPTERA 147 1.1

<u>Nemoura cinctipes</u>	30	
<u>Alloperla</u> sp.	113	
<u>Isogenus</u> sp.	1	
<u>Classenia sabulosa</u>	16	
<u>Acroneuria pacifica</u>	1	162
<u>Arcynopteryx parallela</u> or <u>curvata</u>	1	Total 152

TRICHOPTERA 920 1.2

<u>Glossosoma</u> sp.	21	
<u>Rhyacophila acropedes</u> or <u>vac</u>	18	
✓ <u>Rhyacophila</u> sp. (too small for ident.)	4	
<u>Brachycentrus</u> sp.	33	
<u>Hydropsyche</u> sp.	740	
<u>Arctopsyche grandis</u>	32	
<u>Parapsyche</u> sp.?	3	
<u>Limnephilid</u> genus 2	46	
<u>Lepidostoma</u> sp.	5	908
✓ Pupae and 1 adult	6	Total 107

DIPTERA 221 0.1

<u>Simuliidae</u>	67	
<u>Empididae</u> #1	1	
<u>Antocha</u> sp.	1	
<u>Hexatoma</u> sp.	2	
<u>Pericoma</u> sp.	22	
<u>Tanytarsus</u> sp.	54	
<u>Metriocnemius</u> sp.	40	
<u>Orthocladius</u> sp. 2 (in Nostoc)	17	
<u>Brillia</u> sp.	4	
<u>Cardiocladius</u> sp.	8	
Unknown <u>Orthoclads</u> (in family <u>Tendipedidae</u>)	23	Total 239

COLEOPTERA 108 ?

<u>Optioservus</u> sp.	larvae	33	
	adults	16	
<u>Zaitzevia</u> sp.	larvae	24	
	adults	5	
<u>Cleptelmis</u> cornata	larvae	4	
	adults	1	
<u>Narpus</u> sp.	larvae	1	
<u>Heterlimnius</u> sp.	larvae	4	

Total 88

Original TOTAL
1664

Final TOTAL
~~1649~~ 1651

Patricia Ann
M. H. H.

BLACKFOOT RIVER AT HOGUM CREEK BRIDGE #3

8-23-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 182 0.1

<u>Baetis</u> spp.	61	
<u>Cinygmula</u> sp.	67	
<u>Rhithrogena</u> sp.	3	
<u>Ephemerella grandis inzens</u>	6	
<u>Ephemerella tibialis</u>	3	
<u>Ephemerella hystrix</u>	2	
<u>Ephemerella infrequens</u>	40	Total 182

PLECOPTERA 221 0.2

<u>Nemoura cinctipes</u>	66	
<u>Arcynopteryx curvata</u> or <u>parallela</u>	2	
<u>Isonurus</u> sp.	1	
<u>Acroneuria pacifica</u>	3	
<u>Acroneuria californica</u> (probably)	1	
<u>Alloperla</u> sp.	146	Total 219

TRICHOPTERA 759 0.7

<u>Glossosoma</u> sp.	16	
<u>Rhyacophila acropedes</u> or <u>vao</u>	7	
✓ <u>Rhyacophila</u> sp.	12	
<u>Hydropsyche</u> sp.	602	
<u>Arctopsyche grandis</u>	14	
<u>Brachycentrus</u> sp.	14	
<u>Limnephilidae</u> Genus 2	37	
<u>Lepidostoma</u> sp.	1	
<u>Psychomyiidae</u>	4	
✓ Pupae	6	Total 713

DIPTERA 153 T

<u>Simuliidae</u>	15	
<u>Epididae</u> Genus 1	3	
<u>Antocha</u> sp.	10	
<u>Pericoma</u> sp.	17	
<u>Tanytarsus</u> sp.	18	
<u>Orthocladus</u> sp. 2 (in Nostoc)	41	
<u>Brillia</u> sp.	7	
<u>Metriocnemis</u> sp.	22	
<u>Cardiocladius</u> sp.	7	
Unknown Chironomidae	34	Total 174

COLEOPTERA 118 T

<u>Zaitzevia</u> sp. adults-5, larvae-52	57	
<u>Optioservus</u> sp. adults-9, larvae-42	51	
<u>Cleotelmis ornata</u> adults-2	2	
<u>Narpus concolor</u> larvae-4	4	Total 114

✓ NEMATODA 3 T

Nematoda	3	Total 3
----------	---	---------

Original Total 1436 Final Total 1405

Identified and enumerated by

Patricia Ann Mitchell
Dept. Entomology

ALICE CREEK AT HIGHWAY 200 Bridge #1
8-24-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 285 0.2

<u>Baetis</u> sp.	132
<u>Cinygmula</u> sp.	73
<u>Whithrogena</u> sp.	25
<u>Paralentophlebia</u> sp.	7
<u>Epeorus</u> sp.	2
<u>Ephemerella</u> <u>doddsi</u>	10
<u>Ephemerella</u> <u>infrequens</u>	9
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	11
<u>Ephemerella</u> <u>tibialis</u>	5
<u>Ephemerella</u> <u>hystrix</u>	1

D = 2.24606 DMIN = 0.132307
DMAX = 3.45943 R= 0.36469

Total 275

PLECOPTERA 120 0.5

<u>Nemoura</u> <u>cinctipes</u>	33
<u>Alloperla</u> sp.	73
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	1
✓ <u>Arcynopteryx</u> sp. (too small to identify)	5
<u>Acroneuria</u> <u>pacifica</u>	4
<u>Acroneuria</u> <u>californica</u>	3
✓ <u>Acroneuria</u> sp. (small)	7

D = 1.55281 DMIN = 0.192418
DMAX = 3.16993 R= 0.543112

Total 126

TRICHOPTERA 102 0.5

<u>Hydropsyche</u> sp.	39
<u>Arctopsyche</u> <u>grandis</u>	32
<u>Glossosoma</u> sp.	10
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	6
✓ <u>Rhyacophila</u> sp. (small)	1
<u>Brachycentrus</u> sp.	7
<u>Lepidostoma</u> sp.	1
<u>Limnephilidae</u> Genus 2	2
✓ Pupa	1

D = 2.32339 DMIN = 0.239137
DMAX = 3.70044 R= 0.397843

Total 99

DIPTERA 133 0.2

<u>Hexatoma</u> sp.	2
<u>Antocha</u> sp.	15
<u>Simuliidae</u>	41
<u>Pericoma</u> sp.	31
<u>Cardiocladius</u> sp.	9
<u>Metriocnemius</u> sp.	17
<u>Tanytarsus</u> sp.	1
<u>Orthocladius</u> sp. 2	2
<u>Orthocladius</u> spp. 1 (several species)	37
<u>Brillia</u> sp.	1

D = 2.89004 DMIN = 0.184938
DMAX = 3.70044 R= 0.230523

Total 156
~~157~~

COLEOPTERA 29 0.1

<u>Optioservus</u> sp.	Larvae	25
	Adults	9
<u>Heterlimnius</u> sp.	larvae	3
	Adults	3
<u>Zaitzevia</u> sp.	Larvae	9
	Adults	1

D = 1.39391 DMIN = 0.204085
DMAX = 2. R= 0.337481

Total 50

✓ NEMATODES	2	T	2
	Nematoda		

Total 2

✓ Cottus 1

Original Total 672 Final Total 708

Station D.I.

D = 4.41618 DMIN = 0.239099
DMAX = 5.64386 R= 0.227147

Identified and Enumerated by
Patricia Ann Mitchell
MS Univ. of Montana, 1968

Patricia Ann Mitchell
Jan. 16, 1973

J. D. Mitchell

ALICE CREEK AT HIGHWAY 200 BRIDGE #2
8-24-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 248 C.1

<u>Baetis</u> spp.	80	
<u>Cinygmula</u> sp.	112	
<u>Rhithrogena</u> sp.	1	
<u>Paraleptophlebia</u> sp.	12	
<u>Eohemerella</u> <u>doddsi</u>	7	
<u>Eohemerella</u> <u>infrequens</u>	34	
<u>Eohemerella</u> <u>hystrix</u>	1	
<u>Eohemerella</u> <u>grandis</u> <u>ingens</u>	13	Total 260

PLECOPTERA 187 0.2

<u>Nemoura</u> <u>cintipes</u>	39	
<u>Capnia</u> sp.	5	
<u>Alloperla</u> sp.	100	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	17	
<u>Isogenus</u> (<u>Cultus</u>) <u>aestivalis</u>	1	
<u>Isogenus</u> sp.	2	
<u>Acroneuria</u> <u>pacifica</u>	1	Total 165

TRICHOPTERA 248 0.4

<u>Hydropsyche</u> sp.	111	
<u>Arctopsyche</u> sp.	23	
<u>Glossosoma</u> sp.	24	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	9	
<u>Rhyacophila</u> sp.	1	
<u>Brachycentrus</u> sp.	5	
<u>Limnephilid</u> Genus 1	33	
<u>Limnephilid</u> Genus 2	1	
<u>Lepidostoma</u> sp.	22	
<u>Chimarra</u> sp.	1	
<u>Ochrotrichia</u> sp.	1	
✓ pupae	20	Total 251

DIPTERA 287 0.5

<u>Antocha</u> sp.	106	
<u>Hexatoma</u> sp.	4	
<u>Simuliidae</u>	6	
<u>Empididae</u> #1	2	
<u>Pericoma</u> sp.	56	
<u>Orthocladius</u> sp. 1 (all unknown <u>Orthocladius</u>)	58	
<u>Orthocladius</u> sp. 4	1	
<u>Orthocladius</u> sp. 2	5	
<u>Metriocnemius</u> sp.	45	
<u>Cardiocladius</u> sp.	17	
<u>Brillia</u> sp.	7	
<u>Tanytarsus</u> sp.	4	
Unknown tendipedid (chironomid)*	27	Total 338

COLEOPTERA 94 T

<u>Heterlimnius</u> sp. larvae	19	
<u>Optioservus</u> sp. Larvae	13	adults 13
<u>Zaitzevia</u> sp. larvae	4	adults 1
		Total 50

Identified and Enumerated by
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University of Alberta
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MS Univ. Montana, 1968

Patricia Ann Mitchell
Jan 8, 1973

ALICE CREEK AT HIGHWAY 200 BRIDGE #3

8-24-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 293 0.1

<u>Baetis</u> spp.	55	
<u>Cinygmula</u> sp.	159	
<u>Rhithrogena</u> sp.	7	
<u>Paraleptophlebia</u> sp.	35	
<u>Ephemerella</u> <u>infrequens</u>	33	
<u>Ephemerella</u> <u>doddsi</u>	5	
<u>Ephemerella</u> <u>tibialis</u>	4	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	9	
<u>Ephemerella</u> <u>margarita</u> ?	1	Total 308

PLECOPTERA 163 0.1

<u>Nemoura</u> <u>cinctipes</u>	41	
<u>Alloperla</u> sp.	83	
<u>Isogenus</u> sp.	2	
<u>Arcynopteryx</u> <u>signata</u>	1	
<u>Arcynopteryx</u> <u>parallela</u> or <u>curvata</u>	15	
<u>Capnia</u> sp.	1	Total 143

TRICHOPTERA 215 0.2

<u>Hydropsyche</u> sp.	133	
<u>Arctopsyche</u> <u>grandis</u>	17	
<u>Glossosoma</u> sp.	7	
<u>Rhyacophila</u> <u>venulsa</u>	2	
<u>Rhyacophila</u> <u>acronodes</u> or <u>vac</u>	1	
<u>Trachycentrus</u> sp.	5	
Limnephilid Genus 1	24	
Limnephilid Genus 2 ¹	?	
<u>Lepidostoma</u> sp.	6	
✓ Trichoptera pupae	16	Total 213

DIPTERA 156 0.4

<u>Hexatoma</u> sp.	3	
<u>Antocha</u> sp.	41	
Simuliidae	3	
Empididae #1	1	
<u>Pericoma</u> sp.	71	
<u>Cardiocladius</u> sp.	5	
<u>Metriocnemius</u> sp.	6	
<u>Orthocladius</u> sp. 1 (all unknown Ortho.)	50	
<u>Orthocladius</u> sp. 2	5	
Unknown Chirob. **	22	
<u>Brillia</u> sp.	5	
<u>Tanytarsus</u> sp.	1	Total 213

COLEOPTERA 86 T

<u>Optioservus</u> sp.	larvae 6	adults 9	
<u>Heterlimnius</u> sp.	larvae 3		
<u>Zaitzevia</u> sp.	larvae 4		
<u>Brychius</u> sp.	larva 1		Total 23

✓ NEMATODA 1 T

No nematodes

Original Total 914 Final Total 900

*None to be 1 species - male head. Light mentum

Identified and Enumerated by
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Edmonton, Alberta, Canada

Patricia Ann Mitchell
Jan. 11, 1973

ALICE CREEK ABOVE NATIONAL FOREST BOUNDARY #1

8-24-71

1 sq. ft. sample

L. Spence

EPHEMEROPTERA 156 6.5 cc

Epeorus deceptivus

16

Baetis spp.

17

Cinygmula sp.

110

Ephemerella doddsi

3

Ephemerella coloradensis

7

Ameletus sp.

1

Total 154

PLECOPTERA 44 T

Eucapnopsis brevicauda

45

✓ Allomeria sp. or Arcynopteryx sp.

1

Total 46

TRICHOPTERA 6 T

No trichoptera

DIPTERA

Orthocladus sp. 5 (all same species)

6

Total 6

✓ ANNELIDA 8 T

Annelida

8

Total 8

Original Total 214 Final Total 214

Identified and Enumerated by
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Dept. of Entomology
 University of Alberta
 Edmonton, Alberta, Canada

January 18, 1973

Patricia Ann Mitchell

ALICE CREEK ABOVE NATIONAL FOREST BOUNDARY #2

8-24-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 378 1.0

<u>Baetis</u> spp.	73	
<u>Cinygmula</u> sp.	253	
<u>Epeorus</u> <u>deceptivus</u>	13	
<u>Ephemerella</u> <u>doddsi</u>	13	
<u>Ephemerella</u> <u>coloradensis</u>	13	
<u>Ephemerella</u> <u>grandis</u>	1	
<u>Ameletus</u> sp.	2	Total 368

PLECOPTERA 76 0.1

<u>Eucapnopsis</u> <u>brevicauda</u>	77	
<u>Nemoura</u> <u>cinctipes</u>	1	
<u>Arcynopteryx</u> <u>signata</u>	2	
✓ <u>Arcynopteryx</u> sp. (too small to identify further)	3	Total 84 83

TRICHOPTERA 0

<u>Rhyacophila</u> sp.	1	Total 1
------------------------	---	---------

DIPTERA 15 T

<u>Orthocladius</u> sp. 1	1	
<u>Orthocladius</u> sp. 5	11	
<u>Metriocnemius</u> sp.	1	
Tipulid - <u>Polynema</u> sp. (probably)	2	Total 15

✓ NEMATODA 10 T

Annelida - Oligochaeta	10	Total 10
------------------------	----	----------

Original Total 479

Final Total ⁴⁷⁷~~478~~

Identified and Enumerated by:

Patricia Ann Mitchell

MS Univ. Of Montana, Missoula, 1968

Patricia Ann Mitchell
January 22, 1973

ALICE CREEK ABOVE NATIONAL FOREST BOUNDARY #3

8-24-71

EPEHEMEROPTERA 399 1.6

Cinygmula sp. 174
Baetis spp. 81
Epeorus deceptivus 61
Epeorus longimanus 1
Ephemerella coloradensis 33
Ephemerella doddsi 17
Ephemerella tibialis 1

Total 368

PLECOPTERA 114 0.1

Nemoura cinctipes 23
Eucapnopsis brevicauda 82
Arcynopteryx signata 2
Arcynopteryx sp. 10
Acroneuria sp. 1
 ✓ Unknown Plecoptera (too small to identify) 1

Total 119

TRICHOPTERA 4 T

Glossosoma sp. 2
Psychomyiidae 2

Total 4

DIPTERA 49 T

Metriocnemius sp. 10
Orthocladius sp. 1 7
Orthocladius sp. 5 5
Cardiocladius sp. 3 3
Brillia sp. 24

Total 49

COLEOPTERA 3 T

Zaitzevia sp. adult 1, larva 1 2
Optioservus sp. adult 1

Total 3

✓ NEMATODA 20 T

Annelida - Oligochaeta 20

Total 20

Original Total 589

Final Total 563

Identified and Enumerated by

Patricia Ann Mitchell
 MS, 1968, University of Montana
 Dept. of Entomology
 University of Alberta, Edmonton

January 29, 1973

Patricia Ann Mitchell

Station D.I.

D = 2.64756 DMIN = 0.231286
 DMAX = 4.64386 R = 0.45241

BLACKFOOT RIVER AT FLESHER ROAD BRIDGE #1

8-20-71

1 sq. ft. from center of riffle

L. Spence

EPHEMEROPTERA 20 T

Baetis spp.

✓terrestrial hemipteran

PLECOPTERA 205 0.1

Nemoura cinctipes✓Eucapnopsis or Capnia sp.Acroneuria pacificaIsogenus sp.Alloperla sp.

TRICHOPTERA 77 0.1

Arctopsyche grandisHydropsyche sp.Brachycentrus sp.Limnephilid Genus 2

✓Pupa

DIPTERA 109 T

Antocha sp.SimuliidaePericoma sp.Heleidae - Palpomyia typeTanytarsus sp.Metriocnemius sp.Brillia sp.

Unknown Chironomidae

COLEOPTERA 20 T

Optioservus sp. adultZaitzevia sp. ad-1, lar-3Lara sp. larva

✓NEMATODA 4 T

I guess they are nematodes

Original Total 435

Final Total 429

Identified and Enumerated by

Patricia Ann Mitchell

Dept. of Entomology

University of Alberta

Edmonton, Alberta, Canada

MS Univ. of Montana, Missoula, 1968

Patricia Ann Mitchell
April 16, 1973

Station D.I.

D = 3.813 DMIN = 0.244488
DMAX = 5. R= 0.417325

D = 0.106792 DMIN = 0.106792
DMAX = 1. R= 1

17
1 Total 18

D = 0.892377 DMIN = 7.74919E-2 = .0774919
DMAX = 2.80735 R= 0.781492

155
4
1
1
50 Total 211

D = 2.26383 DMIN = 0.433675
DMAX = 3.16993 R= 0.331751

33
24
11
2
1 Total 71

16
9
20 D = 2.43889 DMIN = 0.253334
1 DMAX = 3.45943 R= 0.328808
4
4
9
56 Total 119

1 D = 0.442661 DMIN = 0.442661
4 DMAX = 1.53496 R= 1
1 Total 6

4 Total 4

BLACKFOOT RIVER AT FLESHER PASS BRIDGE #2

8-20-71

1 sq.ft. from center of riffle L. Spence

EPHEMEROPTERA 21 T

Baetis spp.

16

Total 16

PLECOPTERA 285 0.1

Nemoura cinctipes

249

Alloperla sp.

43

Total 292

TRICHOPTERA 57 0.2

Brachycentrus sp.

17

Rhyacophila acropedes or vao

5

Arctopsyche grandis

9

Hydropsyche sp.

15

Limnephilidae

3

Total 49

DIPTERA 167 T

Antocha sp.

17

Hexatoma sp.

1

Pericoma sp.

30

Simuliidae

2

Heleidae - Palpomyia type

1

Metriocnemius sp.

6

Brillia sp.

11

Tanytarsus sp.

10

Pentaneura sp.

1

Orthoclad unknown #1-see Alice Creek

18

Unknown Chironomidae

91

Total 188

COLEOPTERA 28 T

Zaitzevia sp. lar- 3, ad-4

7

Total 7

Original Total 558 Final Total 552

Identified and Enumerated by

Patricia Ann Mitchell

MS University of Montana, Missoula, 1968

April 23, 1973



BLACKFOOT RIVER AT FLESHER ROAD BRIDGE #3

8-20-71

1 sq. ft. from left of center of stream

L. Spence

EPHEMEROPTERA 48 0.1

Ephemerella doddsi

1

Baetis spp.

37

Total 38

PLECOPTERA 358 0.9

Nemoura cinctipes

259

Claassenia sabulosa

2

Isogenus sp.

1

Arcynopteryx curvata or parallela

2

✓ Perlodidae (too small to identify)

1

Alloperla sp.

99

Capnia sp.

5

Total 369

TRICHOPTERA 48 0.2

Brachycentrus sp.

6

Arctopsyche grandis

8

Hydropsyche sp.

10

Rhyacophila acropedes or vao

2

Limnephilid genus 1

1

Limnephilid genus 2

11

Lepidostoma sp.

1

Trichodes sp.

1

✓ Pupa

1

Total 41

DIPTERA 101 T

Antocha sp.

14

Pericoma sp.

5

Simuliidae

3

Metriocnemius sp.

1

Billia sp.

5

Tanytarsus sp.

11

Unknown Orthoclad #1

9

Unknown Chironomidae

42

Total 90

COLEOPTERA 8 T

Zaitzevia sp. lar-10, ad-5

15

Total 15

Original Total 563, Final Total 553

Identified and Enumerated by

Patricia Ann Mitchell

MS, Univ. of Montana, 1968

April 27, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT POP'S PLACE #1

8-20-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 1 T

Baetis sp.

S=1 No diversity computed

1 Total 1

$D = 1.34479$ $DMIN = 0.264832$

$DMAX = 2.32193$ $R = 0.475007$

PLECOPTERA 35 T

Nemoura cinctipes

Isogenus sp.

Alloperla sp.

22

8

4

Total 34

TRICHOPTERA 2 T

✓ Pupae

*S=2 D= DMAX = DMIN, R is undefined
1 of each species*

2

Total 2

$D = 2.02492$ $DMIN = 0.927075$

$DMAX = 2.32193$ $R = 0.212932$

DIPTERA 20 T

Simuliidae

Cardiocladius sp.

Brillia sp.

Orthocladius sp. 1

3

4

6

7

Total 20

Original Total 58

Final Total 57

Identified and Enumerated by

Patricia Ann Mitchell

MS, University of Montana, 1968

January 29, 1973

Patricia Ann Mitchell

Station D.I.

$D = 2.4173$ $DMIN = 0.810952$

$DMAX = 4. R = 0.496293$

BLACKFOOT RIVER AT POP'S PLACE #2

8-20-71

1 sq. ft.

L. Spence

PLECOPTERA 45 T

<u>Nemoura cinctipes</u>	29	
<u>Isogenus sp.</u>	3	
<u>Acroneuria theodora</u>	1	
<u>Allomeria sp.</u>	9	
<u>Paraperla frontalis</u>	2	Total 44

TRICHOPTERA 2 T

<u>Rhyacophila angelita?</u> (unsure of species)	1	
<u>Parapsyche almota</u>	1	Total 2

DIPTERA 4 T

<u>Orthocladus sp. 1</u>	3	
<u>Orthocladus sp. 5</u>	1	Total 4

COLEOPTERA 4 T

<u>Optioservus sp. adult</u>	1	
<u>Heterlimnius corpulentus adult</u>	2	
<u>Zaitzevia sp. adult</u>	1	Total 4

D = 1.37095 DMIN = 1.37095
DMAX = 1.58496 R = 1.

Original Total 55 Final Total 54

Identified and Enumerated by

Patricia Ann Mitchell

MS, University of Montana, 1968

Dept. of Entomology

University of Alberta, Edmonton

January 29, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT POP'S PLACE #3

8-20-71

1 sq. ft.

L. Spence

PLECOPTERA 48 T

<u>Nemoura cinctipes</u>	37	
<u>Paraperla frontalis</u>	2	
<u>Isogenus</u> sp.	2	
<u>Alloperla</u> sp.	8	Total 49

DIPTERA 2 T

<u>Simuliidae</u>	1	
<u>Orthocladius</u> sp. 1	1	Total 2

COLEOPTERA 1 T

<u>Heterlimnius cornulentus</u> adult	1	Total 1
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Original Total 51 Final Total 52

Identified and Enumerated by
 Patricia Ann Mitchell
 MS, University of Montana, 1968

January 30, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT RAINBOW BEND #1

11-2-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 181 0.2

<u>Baetis</u> sp. (probably <u>bicaudatus</u>)	6	
<u>Amelstus</u> sp.	8	
<u>Paraleptophlebia</u> sp.	1	D = 1.96137 DMIN = 0.289997
<u>Cinygmula</u> sp.	3	DMAX = 3.16993 R= 0.408305
<u>Rhithrogena</u> sp.	28	
OK <u>Epeorus</u> sp. (too small to ident. further)	19	
<u>Ephemerella lacustris</u> ? (similar to <u>infrequens</u>)	112	Total 177

PLECOPTERA 75 0.3

<u>Eucapnopsis brevicauda</u> (probably)	28	
<u>Pteronarcys californica</u>	1	D = 2.3301 DMIN = 0.653403
<u>Arcynopteryx curvata</u> or <u>parallela</u>	1	DMAX = 3.32193 R= 0.371676
<u>Isoperla</u> sp.	28	
<u>Acroneuria californica</u>	8	
<u>Alloperla</u> sp.	8	Total 74

TRICHOPTERA 80 0.3

<u>Hydropsyche</u> sp.	74	D = 0.282386 DMIN = 0.150397
<u>Psychomyia</u> sp.	1	DMAX = 2.58496 R= 0.945785
<u>Agraylea</u> sp.	2	Total 2
		77

DIPTERA 47 0.4

<u>Hexatoma</u> sp.	1	
<u>Empididae</u> #3	1	D = 1.6919 DMIN = 0.795246
<u>Pentaneura</u> sp.	2	DMAX = 3. R= 0.593309
<u>Metriocnemius</u> sp.	1	
Unknown orthoclad #6	15	
Unknown Chironomidae	26	Total 46

COLEOPTERA 4 T

<u>Zaitzevia</u> sp. lar.	4	s=1 No diversity computed
		Total 4

✓ NEMATODA 10 T

<u>Oligochaeta</u>	9	
<u>Nematoda</u>	1	Total 10

Original Total 397 Final Total ³⁸⁸~~387~~

Identified and Enumerated by
 Patricia Ann Mitchell
 Department of Zoology
 University of Alberta
 Edmonton, Alberta, Canada
 July 30, 1973

Patricia Ann Mitchell

station D.I.

D = 3.11452 DMIN = 0.416179
 DMAX = 5.08746 R= 0.422355

BLACKFOOT RIVER AT RAINBOW BEND #2

11-2-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 103 0.1

<u>Baetis</u> spp.	4	
<u>Paraleptophlebia</u> sp.	2	
<u>Cinygmula</u> sp.	2	
<u>Rhithrogena</u> sp.	32	
<u>Epeorus</u> sp.	18	
<u>Ephemerella lacustris</u> or <u>infrequens</u>	42	
<u>Ephemerella doddsi</u>	3	Total 103

PLECOPTERA 22 0.5

<u>Pteronarcys californica</u>	3	
<u>Eucapnopsis brevicauda</u>	2	
<u>Isogenus aestivalis</u>	1	
<u>Isoperla</u> sp.	8	
<u>Acro-neuria californica</u>	1	
<u>Alloperla</u> sp.	2	
✓ <u>Perlodidae</u> (small)	2	Total 19

TRICHOPTERA 150 0.4

<u>Hydropsyche</u> sp.	144	
<u>Parapsyche elsis</u> Milne	1	
<u>Rhyacophila</u> sp.	1	Total 146

DIPTERA 11 T

<u>Pentaneura</u> sp.	2	
<u>Antocha</u> sp.	1	
Unknown Chironomidae	8	Total 11

✓ OLIGOCHAETA 3 T

<u>Oligochaetes</u>	3	Total 3
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Original Total 289 Final Total 282

Identified and Enumerated by

Patricia Ann Mitchell

MS, Univ. Of Montana, 1968

July 30, 1973



BLACKFOOT RIVER AT RAINBOW BEND #3

11-2-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 104 T

<u>Baetis</u> sp.	14	
<u>Rhithrogena</u> sp.	30	
<u>Epeorus</u> sp.	15	
<u>Heptagenia elegantula</u>	1	
<u>Ephemerella lacustris</u> or <u>infrequens</u>	41	Total 101

PLECOPTERA 21 0.5

<u>Eucapnopsis brevicauda?</u>	1	
<u>Pteronarcys californica</u>	1	
<u>Nemoura cinctipes</u>	1	
<u>Isogenus aestivalis</u>	2	
<u>Isoperla</u> sp.	8	
<u>Claassenia sabulosa</u>	1	
<u>Acroneuria californica</u>	7	
<u>Acroneuria pacifica</u>	1	Total 22

TRICHOPTERA 104 0.8

<u>Hydropsyche</u> sp.	96	
<u>Parapsyche elsis</u>	4	
<u>Glossosoma</u> sp.	1	
<u>Rhyacophila</u> sp.	1	Total 102

DIPTERA 8 T

Dolichopodidae larva (probably)	1	
<u>Metriocnemius</u> sp.	1	
Chironomidae unknowns	6	Total 8

COLEOPTERA 1 T

<u>Zaitzevia</u> sp. larva	1	Total 1
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✓ Nematoda 1
Oligochaeta

1 Total 1

Original Total 239 Final Total 235

Identified and Enumerated by

Patricia Ann Mitchell

MS, University of Montana, 1968

July 31, 1973



BLACKFOOT RIVER BETWEEN LANDER'S FORK AND LINCOLN #1

10-26-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 620 0.9

<u>Cinygmula</u> sp.	76	D = 1.35868 DMIN = 0.034497 DMAX = 2.58496 R = 0.2879
<u>Rhithrogena</u> spp. (prob. more than 1)	416	
<u>Baetis</u> sp.	32	
<u>Ephemerella</u> <u>doddsi</u>	57	
<u>Ephemerella</u> <u>infrequens</u>	34	
Total 615		

PLECOPTERA 111 0.4

<u>Nemoura</u> <u>cinctipes</u>	4	D = 2.26964 DMIN = 0.528126 DMAX = 3.98689 R = 0.48457
<u>Capnia</u> sp.	14	
<u>Brachyptera</u> sp.	21	
<u>Isogenus</u> sp.	3	
<u>Perlodidae</u>	1	
<u>Acroneuria</u> <u>californica</u>	2	Total 109
<u>Acroneuria</u> <u>theodora</u> (probably)	1	
<u>Alloperla</u> sp.	63	

TRICHOPTERA 162 0.5

<u>Arctopsyche</u> <u>grandis</u>	10	D = 1.28745 DMIN = 9.28443E-2 = .0928443 DMAX = 3.16993 R = 0.611774
<u>Glossosoma</u> sp.	109	
<u>Hydropsyche</u> sp.	50	Total 172
<u>Limnephilidae</u> Genus 1	3	

DIPTERA 27 0.3

<u>Simuliidae</u>	3	D = 2.1821 DMIN = 0.672346 DMAX = 3.45943 R = 0.458383
<u>Hexatoma</u> spp.	6	
<u>Dicranota</u> sp.	1	
<u>Antocha</u> sp.	1	
<u>Empididae</u> Genus 1	1	
<u>Pericoma</u> sp.	12	Total 27
<u>Cardiocladius</u> sp.	1	
<u>Chironomidae</u> unknowns	2	

COLEOPTERA 2 T

<u>Optioservus</u> sp. adults	2	D = 1.37095 DMIN = 1.37095 DMAX = 1.58496 R = 1.
Total 2		

✓ ANNELIDA 3 T

<u>Oligochaetes</u>	3	Total 3
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Original Total 925 Final Total 928

Identified and Enumerated by
Patricia Ann Mitchell
MS Univ. Of Montana, 1968

June 14, 1973

Patricia Ann Mitchell

Station D.I.

D = 3.57669 DMIN = 0.21645
DMAX = 5.45943 R = 0.359093

BLACKFOOT RIVER BETWEEN LANDER'S FORK AND LINCOLN #2
10-26-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 565 1.2

<u>Baetis</u> sp.	42	
<u>Cinygmula</u> sp.	67	
<u>Rhithrogena</u> sp.	342	
<u>Ephemerella doddsi</u>	55	
<u>Ephemerella grandis ingens</u>	2	
<u>Ephemerella infrequens</u>	67	Total 575

PLECOPTERA 65 0.7

<u>Pteronarcella badia</u>	2	
<u>Brachyptera</u> sp.	17	
<u>Capnia</u> sp.	9	
<u>Arcynopteryx curvata</u> or <u>parallela</u>	1	
<u>Arcynopteryx signata</u>	1	
<u>Isogenus</u> sp.	1	
✓ <u>Perlodidae</u> (too small)	1	
<u>Acroneuria californica</u>	1	
<u>Acroneuria pacifica</u>	4	
<u>Claassenia sabulosa</u>	1	
<u>Alloperla</u> sp.	21	
<u>Paraperla frontalis</u>	2	Total 61

TRICHOPTERA 292 0.5

<u>Glossosoma</u> sp.	186	
<u>Arctopsyche grandis</u>	21	
<u>Hydropsyche</u> sp.	84	
<u>Rhyacophila acropedes</u> or <u>vao</u>	1	Total 292

DIPTERA 42 0.6

<u>Hexatoma</u> sp.	10	
<u>Antocha</u> sp.	2	
<u>Empididae</u> #2	5	
<u>Simuliidae</u>	1	
<u>Pericoma</u> sp.	25	Total 43

COLEOPTERA 1 T

<u>Zaitzevia</u> sp. lar.	1	Total 1
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✓ NEMATODA 1 T

Nematoda	1	Total 1
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Original Total ⁹⁶⁶~~967~~ Final Total 973

Identified and Enumerated by
Patricia Ann Mitchell, M.S.
Department of Zoology
University of Alberta
Edmonton, Alberta, Canada
July 27, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER BETWEEN LANDER'S FORK AND LINCOLN #3

10-26-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 582 1.0

<u>Baetis</u> sp.	119	
<u>Cinygmula</u> sp.	78	
<u>Rhithrogena</u> sp.	257	
<u>Ephemerella</u> <u>doddsi</u>	42	
<u>Ephemerella</u> <u>grandis ingens</u>	2	
<u>Ephemerella</u> <u>infrequens</u>	85	Total 583

PLECOPTERA 84 0.2

<u>Brachyptera</u> sp.	4	
<u>Capnia</u> sp.	12	
<u>Nemoura</u> <u>cinctipes</u>	10	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	1	
<u>Isogenus</u> <u>aestivalis</u>	2	
<u>Isogenus</u> sp.	3	
<u>Acroneuria</u> <u>pacifica</u>	1	
<u>Claassenia</u> <u>sabulosa</u>	1	
<u>Alloperla</u> sp.	45	
✓ Plecoptera too small to identify	4	Total 83

TRICHOPTERA 515 1.1

<u>Glossosoma</u> sp.	331	
<u>Arctopsyche</u> <u>grandis</u>	37	
<u>Hydropsyche</u> sp.	142	
<u>Rhyacophila</u> <u>acropedes</u> of <u>vao</u>	1	
<u>Rhyacophila</u> sp.	1	
<u>Tinodes</u> sp.	1	
<u>Brachycentrus</u> sp.	1	
Limnephilidae Genus 2	2	Total 516

DIPTERA 54 0.2

<u>Hexatoma</u> sp.	6	
Empididae #4	1	
Empididae #5	1	
<u>Pericoma</u> sp.	25	
<u>Cardiocladius</u> sp.	1	
Unknown Orthoclad Chironomidae	20	Total 54

COLEOPTERA 2 T

<u>Narpus</u> <u>concolor</u> adult	1	
<u>Optioservus</u> sp. lar.	1	Total 2

✓ NEMATODA 3 T

Nematoda	3	Total 3
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✓ COTTUS SP. 3

3	Total 3
---	---------

Original Total 1243

Final Total 1244

Enumerated and Identified by
 Patricia Ann Mitchell
 July 27, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT POP'S PLACE #1

10-19-71

1 sq. ft.

L. Spence

PLECOPTERA 43 0.1

Nemoura cinctipes
Eucapnopsis brevicauda
Isogenus spl.
Alloperla sp.
Paraperla frontaxis

23 D = 1.97862 DMIN = 0.215302
1 DMAX = 2.02193 R= 0.166763
7
10
2 Total 43

TRICHOPTERA 2 T

Arctopsyche grandis
Parapsyche almota

D = 1.5 DMIN = 1.5
1 DMAX = 1.58496 R= 1
1 Total 2

DIPTERA 2 T

Metriocnemius sp.
Unknown Chironomidae

D = 0.455021 DMIN = 0.455021
1 DMAX = 1.58496 R= 1
1 Total 2

Original Total 47 Final Total 47

Identified and Enumerated by

Patricia Ann Mitchell

MS, University of Montana, 1968

July 31, 1973

Patricia Ann Mitchell

station D.I.

D = 2.50616 DMIN = 0.503174
DMAX = 3.58496 R= 0.350626

BLACKFOOT RIVER AT POP'S PLACE #2

10-19-71

1 sq. ft.

L. Spence

EPHECOPTERA 34 0.1

<u>Nemoura cinctipes</u>	12	
<u>Eucapnopsis brevicauda</u>	5	
<u>Isogenus sp.</u>	4	
<u>Alloperla sp.</u>	12	
<u>Paraperla frontalis</u>	1	Total 34

COLEOPTERA 1 T

Zaitzevia sp. adult

S=1 No diversity computed
1

DIPTERA 1 T

Could not find a dipteran

Original Total 36 Final total 35

Identified and enumerated by

Patricia Ann Mitchell

MS, University of Montana, 1968

July 31, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT POP'S PLACE #3

10-19-71

1 sq. ft.

L. Spence

PLECOPTERA 87 0.2

<u>Nemoura cinctipes</u>	27	
<u>Eucapnopsis brevicauda</u>	12	
<u>Isogenus</u> sp.	13	
<u>Alloperla</u> sp.	32	
<u>Paraperla frontalis</u>	2	Total 86

TRICHOPTERA 2 T

<u>Arctopsyche grandis</u>	1	
Hydropsychidae (head missing)	1	Total 2

DIPTERA 26 T

<u>Antocha</u> sp.	1	
Unknown Chironomidae	24	Total 25

Original Total 115 Final Total 113

Identified and Enumerated by

Patricia Ann Mitchell

MS, University of Montana, 1968

July 31, 1973

Patricia Ann Mitchell

BLACKFOOT RIVER AT FLESHER PASS RD. BRIDGE #1

10-19-71

159 ft. 1245

L. Spence

Ephemeroptera 22 T

Baetis sp. 16

Cinygmula sp. 5 TOTAL 21

Plecoptera 130 0.2

Nemoura cinctipes 21

Capnia sp. 2

Leuctra sp. 20

Isogenus sp. 5

Acroneuria sp. 2

Alloperla sp. 79

Paraperla frontalis 2 TOTAL 131

Trichoptera 49 0.1

Hydropsyche sp. 13

Brachycentrus sp. 34

Rhyacophila acropedes or var 1

Limnephilid #2 1 TOTAL 49

Diptera 161 0.1

Antocha sp. 88

Percnoma sp. 64

Tanypodinae 4

Orthoclads 2 TOTAL 158

Original TOTAL 362

Final TOTAL 359

Blackfoot River at Flecker Pass Rd. Bridge #2
 1 sq. ft. 10-19-71 L. Spence

Ephemeroptera 60 T

Baetis sp. 40

Cinygmula sp. 15 TOTAL 55

Plecoptera 145 0.6

Nemoura cinctipes 34

Capnia sp. 6

Leuctra sp. 11

Arcynopteryx parallela or curvata 2

Isogenus sp. 6

Acroneuria pacifica 2

Claassenia sabulosa 2

Alloperla sp. 81 TOTAL 144

Trichoptera 54 0.1

Hydropsyche sp. 14

Arctopsyche grandis 1

Glossosoma sp. 1

Rhyacophila acropedes or orvao 2

Brachycentrus sp. 33

Limnephilidae #2 2

Hydroptila sp. 1 TOTAL 54

Diptera 137 0.2

Antocha sp. 72

Pericoma sp 59

Orthoclad Chironomidae 3
(several species)

Tanytarsini Chironomidae 1
(1 species)

TOTAL 135

Unknown 2 T

Nematoda 2

TOTAL 2

Original Total - 398

FINAL TOTAL - 390

Identified & Enumerated by:
Patricia Ann Mitchell
Dept. Zoology
University of Alberta
Edmonton.

Blackfoot R. at Flasher Pass Rd. Bridge #3

159 ft.

10-19-71

1300

L. Spence

Ephemeroptera

149

T

Baetis sp.

101

Cinygmula sp.

37

Ephemerella infrequens

3

TOTAL 141

Plecoptera

165

0.4

Nemoura cinctipes

24

Capnia sp.

20

Leuctra sp.

15

Arctopteryx curvata or parabola

1

Isogenus sp.

4

Isoperla sp.

2

Acro-neuria pacifica

3

Claussenia sabulosa

2

Paraperla frontalis

4

Alloperla sp.

83

TOTAL 160

Trichoptera

45

0.1

Hydropsyche sp.

3

Arctopsyche grandis

1

Rhyacophila acropedes or uao

3

Rhyacophila coloradensis

2

Glossosoma sp.

1

Brachycentrus sp.

35

TOTAL 45

Diptera	313	0.3	
<u>Hexatoma</u> sp.		5	
<u>Dicranota</u> sp.		4	
<u>Antocha</u> sp.		191	
Empididae #1		1	
<u>Pericoma</u> sp.		85	
Tanypodinae Chironomidae (prob. 1 species)		4	
Orthoclad Chironomidae (several species)		27	TOTAL 317

Annelida	2	T	
Oligochaeta		2	TOTAL 2

Original Total	674
Final Total	665

Patricia Ann Mitchell

Alice Creek at Highway 200 #1

10-19-71 159 ft. 1315 L. Spence

Ephemeroptera 290 0.5

Baetis spp. 69

Cinygmula sp. 111

Rhythrogena sp. 21

Ephemerella grandis ingens 10

E. infrequens 57

E. doddsi 12

Paraleptophlebia sp. 19 TOTAL 299

Plecoptera 145 0.5

Nemoura cinetipes 15

Capnia sp. 12

Isogenus sp. 8

Alloperla sp. 91

Acroneuria pacifica 4

Acroneuria californica 1 TOTAL 131

Trichoptera 269 0.9

Hydropsyche sp. 146

Arctopsyche grandis 7

Glossosoma sp. 64

Brachycentrus sp. 19

Rhyacophila ^{rao or} _{acropedus} 5

R. vepulsa 1

pupae 2

(pupae usually are
same as above larvae)

244
TOTAL 264

Diptera 465 T + 42

Hexatoma sp. 5

Antocha sp. 131

Pericoma sp. 152

Orthoclad #2 162

(one easily recognizable
species that lives in
the blue-green alga
Nostoc)

Other orthocladinae 40

Tanytarsini 1

Brillia sp. 1

TOTAL 492

Coleoptera 73 0.1

Optioservus sp. 38

Heterlimnius sp. 18

Zaitzevia sp. 17

TOTAL 73

Annelida 2 T

Oligochaeta-family Naichidae 2

TOTAL 2

Original TOTAL 1286

Final TOTAL ~~1261~~ 1241

May 9, 1974
Patricia Ann Mitchell
Dept. Zoology, Univ. Alberta

Alice Creek at Highway 200 #2
 10-19-71 15 ft. 1330 L. Spence

Ephemeroptera [210 0.4]

<u>Baetis</u> sp.	69	
<u>Cinygmula</u> sp.	51	
<u>Rhythrogena</u> sp.	2	
<u>Ephemerella grandis ingens</u>	10	
<u>E. infrequens</u>	61	
<u>E. cloddsi</u>	8	
<u>E. tibialis</u>	1	
<u>Paraleptophlebia</u> sp.	5	TOTAL 207

Trichoptera [110 0.1]

<u>Nemoura cinctipes</u>	56	
<u>Capnia</u> sp.	5	
<u>Isogenus</u> sp.	15	
<u>Acroneuria</u> sp. (small)	1	
<u>Alloperla</u> sp.	26	
<u>Argynopteryx curvata</u> or <u>parallela</u>	1	TOTAL 104

Trichoptera [318 1.9]

<u>Hydropsyche</u> sp.	158	
<u>Arctopsyche grandis</u>	18	
<u>Glossosoma</u> sp.	37	
<u>Brachycentrus</u> sp.	56	
<u>Rhyacophila acropedes</u> ^{fat}	33	
<u>R. repulsa</u>	1	
<u>Chimarra</u> sp.	9	
<u>Limnephilidae</u> sp. 2	1	TOTAL 316
	2	317

Diptera	411	0.2	+ 60	
<u>Hexatoma</u> sp.		3		
<u>Antocha</u> sp.		129		
<u>Pericoma</u> sp.		106		
<u>Orthoclad</u> #2		137		
other orthocladinae		17		
<u>Brillia</u> sp.		1		
<u>Simuliidae</u>		2	+ 60	
<u>Empididae</u> #1		3		TOTAL 458

Coloptera	38	T		
<u>Optioservus</u> sp.		30		
<u>Heterolimnius</u> sp.		5		
<u>Zaitzevia</u> sp.		3		TOTAL 38

Unknown	1	T		
Nematoda		1		TOTAL 1

Original	TOTAL	1148
Final	TOTAL	1124

Alice Creek at Highway 200 #3

10-19-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 275 0.5

<u>Baetis</u> spp. (2 species present) -	35	
<u>Cinygmula</u> sp.	106	
<u>Rhithrogena</u> sp.	7	
<u>Ephemerella</u> <u>doddii</u>	11	
<u>E. grandis</u> <u>ingens</u>	24	
<u>E. infrequens</u>	72	
<u>E. spinifera</u>	1	
<u>E. tibialis</u>	1	
<u>Paraleptophlebia</u> sp.	12	TOTAL 269

PLECOPTERA 119 0.3

<u>Nemoura</u> <u>cinctipes</u>	6	
<u>Capnia</u> sp.	8	
<u>Isogenus</u> sp.	20	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	4	
<u>Acroneuria</u> sp. (prob. <u>pacifica</u>)	3	
<u>Alloperla</u> sp.	69	
Small Chloroperlidae (may be <u>Paraperla</u> <u>frontalis</u> - too small to be sure)	5	TOTAL 115

TRICHOPTERA 344 0.8

<u>Hydropsyche</u> sp.	116	
<u>Arctopsyche</u> <u>grandis</u>	5	
<u>Glossosoma</u> sp.	136	
<u>Brachycentrus</u> sp.	58	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	12	
<u>R. repulsa</u>	2	

Limnephilidae #1

4

pupae

2

TOTAL 335

DIPTERA

700

0.2

+ 107

Hexatoma sp.

1

Antocha sp.

158

Empididae #1

4

Pericoma sp.

223

Orthoclad #2

360 (including those in Nostoc)

other orthoclad chironomidae

58

Brillia sp.

3

Metriocnemius sp.

2

Tanytarsini

1

TOTAL 810

COLEOPTERA

60

T

Optioserinus sp.

39

Zaitzevia sp.

6

Heterolimnius sp.

15

TOTAL 60

COTTUS

1

T

ORIGINAL TOTAL - 1606

final TOTAL - ~~1600~~
1589

Patricia Ann Mitchell

BLACKFOOT RIVER AT HOGUM CR. ROAD BRIDGE #1

Ephemeroptera 208 0.1

Baetis spp. (seems to be 2) 57

Cinygmula sp. 74

Ephemerella infrequens 124

Paraleptophlebia sp. 6 TOTAL 261

Plecoptera 128 0.1

Nemoura cinctipes 17

Capnia sp. 3

Isoperla sp. 6

Isogenus sp. 3

Alloperla sp. 44

Acroneuria sp. (Too small to distinguish species) 1 TOTAL 74

Trichoptera 478 0.8

Hydropsyche sp. 336

Glossosoma sp. 64

Brachycentrus sp. 9

Rhyacophila acropedes or vao 16

Rhyacophila coloradensis 8

Limnephilid # 2 7

Limnephilidae (one species, tiny) 5

Lepidostoma sp. 25

pupae (probably same species as above) 2 TOTAL 472
~~491~~

Diptera	2120	1.1	
<u>Antocha</u> sp		69	
<u>Pericoma</u> sp		113	
Empididae #1		7	
Tanytarsini (type of Chironomid)		1	
Orthoclad #2 (Nostoc-type)	1898		
Other Orthoclad Chironomids	7		TOTAL 2095

Coleoptera	62	0.1	
<u>Optioservus</u> sp.		43	
<u>Zaitzevia</u> sp.		19	TOTAL 62

Nematoda	4	T	
Nematoda		4	TOTAL 4

Original Total - 3000

Final Total ~~2969~~
2968

Patricia Ann Mitchell
dept. Zoology
University of Alberta
May. 22, 1974

BLACKFOOT RIVER AT HOGUM CR. ROAD BRIDGE #2

11-1-71

1 sq. ft.

L. Spence

Ephemeroptera 705 0.6

Baetis sp. 147

Cinygmula sp. 328

Rhytrogena sp. 10

Ephemerella infrequens 208

E. grandis ingens 2

E. hystrix 1

Paraleptophlebia sp. 4 TOTAL 700

Plecoptera 177 0.9

Nemoura cinctipes 12

Capnia sp. 2

Isogenus sp. 3

Isoperla sp. 12

Claassenia sabulosa 14

Acroneuria sp. (may be 2 species - very small)
(prob. pacifica) 17

Alloperla sp. 112 TOTAL 172

Trichoptera 784 1.9

Hydropsyche sp. 584

Arctopsyche grandis 1

Glossosoma sp. 106

Brachycentrus sp. 20

Rhyacophila coloradensis 10
(in former samples, called Rhyacophila sp.)

R. acropedes or rao 5

Lepidostoma sp. 38

Limnephilid #2 12

Limnephilid #1 1

Trichoptera continued

other Limnephilidae (all same species but not #1 or #2)	5	
pupae	5	TOTAL 787

Diptera 735 1.2

<u>Hexatoma</u> sp	2	
<u>Antocha</u> sp	28	
Simuliidae	1	
Empididae #1	1	
<u>Pericoma</u> sp.	140	
Orthoclad #2 (including those in alga NOSTOC)	774	
Tanytarsini (chironomidae)	1	
Tanypodinae (chironomidae)	1	
orthoclad chironomidae	4	TOTAL 952

Coleoptera 110 0.1

<u>Optioservus</u> sp.	59	
<u>Zaitzevia</u> sp.	43	
<u>Heterlimnius</u> sp.	5	
<u>Narpus</u> sp.	4	TOTAL 111

Nematoda 1 T

Nematoda	1	TOTAL 1
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Original TOTAL 2512

final TOTAL 2723 (including 219 in Nostoc)

Patricia Ann Mitchell

BLACKFOOT R. AT HOGUM CR. ROAD #3

11-1-71

159 ft.

L. Spence

Ephemeroptera 381 0.2

Baetis spp. (2 species) 54

Cinygmula sp. 126

Rhithrogena sp. 2

Ephemerella infrequens 197

E. grandis ingens 2

TOTAL 381

Plecoptera 95 0.2

Nemoura cinctipes 9

Capnia sp. 3

Iso genus sp. 7

Isoperla sp. 3

Claassenia sabulosa 1

Acro neuria sp. 9

Alloperla sp. 61

TOTAL 93

Trichoptera 750 1.7

Hydropsyche sp. 478

Arctopsyche grandis 8

Glossosoma sp. 159

Brachycentrus sp. 57

Rhyacophila coloradensis 3

R. acropedes or vao 5

Limnephilid #2 10

other Limnephilidae 5

Lepidostoma sp. 20

TOTAL 745

Diptera 999 0.4

Hexatoma sp. 3

Dicranota sp. 1

Simaliidae 1

Antocha sp. 54

Pericoma sp. 73

Orthoclad #2 860

Orthoclads 5

Tanytarsini 1

TOTAL 998

Coleoptera 83 0.1

Optioservus sp. 59

Zaitzevia sp. 16

Heterolimnius sp. 2

Cleptelmis ornata 1

TOTAL 78

Nematoda 6 T

Nematoda 6

TOTAL 6

Original TOTAL 2301

Final TOTAL 2301

Poorman Creek #1

157 ft.

11-2-71

L. Spence.

Ephemeroptera	990	0.8	
<u>Baetis</u> spp. (2 species)			367
<u>Cinygmula</u> sp.			502
<u>Rhithrogena</u> sp.			53
<u>Ameletus</u> sp.			1
<u>Paraleptophlebia</u> sp.			5
<u>Ephemerella</u> <u>doddsi</u>			2
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>			2
<u>Ephemerella</u> <u>hystrix</u>			40
<u>Ephemerella</u> <u>infrequens</u>			6
			TOTAL 978

Decoptera	839	3.0	
<u>Nemoura</u> <u>cinctipes</u>			756
<u>Brachyptera</u> sp.			4
<u>Pteronarcella</u> <u>spadia</u>			1
<u>Capnia</u> sp.			2
<u>Isoenus</u> sp.			8
<u>Isoperla</u> sp.			7
<u>Acroneuria</u> <u>pacifica</u>			31
<u>Alloperla</u> sp.			43
			TOTAL 852

Trichoptera	199	1.9	
<u>Hydropsyche</u> sp.			2
<u>Arctopsyche</u> <u>grandis</u>			98
<u>Glossosoma</u> sp.			52
<u>Brachycentrus</u> sp.			1
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>			19

Trichoptera continued

<u>Rhyacophila repulsa</u>	17	
<u>Limnephilidae</u> the unknown	1	
<u>Lepidostoma</u> sp.	4	
<u>Tinodes</u> sp.	1	TOTAL 195

Diptera 227 0.2

<u>Antocha</u> sp.	91	
<u>Simuliidae</u>	2	
<u>Empididae</u> #1	14	
<u>Dicranota</u> sp.	2	
<u>Pericoma</u> sp.	52	
<u>Orthoclad</u> #2 (Nostoc-type)	25	
<u>Metriocnemius</u> sp.	5	
<u>Orthoclad</u> Chironomidae	29	TOTAL 220

Coleoptera 80 0.1

<u>Optioservus</u> sp.	3	
<u>Heterlimnius</u> sp.	77	
<u>Zaitzevia</u> sp.	1	
<u>Narpus</u> sp.	2	
<u>Brychius</u> sp (Hydrophilid beetle ^{adult})	9	TOTAL 92

Annelida 16 0.1

<u>Oligochaeta</u>	10	
<u>Nematoda</u>	6	TOTAL 16

Unknown 10 +
moved to Coleoptera

Original Total 2361
Final TOTAL 2353

Poorman Creek #2

159 ft

11-2-71

L. Spence

Ephemeroptera 823 0.9

Baetis spp. 332

Cinygmula sp. 361

Rhythrogena sp. 36

Paraleptophlebia sp. 17

Ephemerella doddsi 5

Ephemerella grandis ingens 4

Ephemerella hystrix 43

Ephemerella infrequens 14 TOTAL 812

Plecoptera 780 2.1

all Plecoptera dried up TOTAL 780

Trichoptera

Hydropsyche sp. 3

Arctopsyche grandis 116

Glossosoma sp. 47

Brachycentrus sp. 3

Rhyacophila acropedes or vao 29

Rhyacophila repulsa 18

Hydroptila sp. 4 TOTAL 220

Diptera	431	0.5	
<u>Antocha</u> sp.		150	
<u>Dicranota</u> sp.		3	
<u>Simuliidae</u>		5	
<u>Empididae</u> #1		24	
<u>Empididae</u> #2		1	
<u>Pericoma</u> sp.		72	
<u>Orthoclad</u> #2		139	
<u>Brillia</u> sp.		6	
<u>Metriocnemius</u> sp.		3	
<u>Orthoclad Chironomidae</u> (other than #2)	23		TOTAL 426

Coleoptera	41	0.1	
<u>Heterlimnius</u> sp. (^{prob.} <u>corpulentus</u>)		40	
<u>Optioservus</u> sp.		1	
<u>Narpus concolor</u>		2	TOTAL 43 50
<u>Brychius</u> sp.		7	

Annelida	49	0.3	
<u>Lumbriculidae</u> } <u>Oligochaeta</u>		5	
<u>Naididae</u>		44	TOTAL 49

Unknown 9 T
 moved to Coleoptera

Original Total 2355
 Final Total 2337

Identified & Enumerated by
 Patricia Ann Mitchell

Poorman Creek #3

15pp

11-2-71

L. Spence

Ephemeroptera	1006	1.1	
<u>Baetis</u> sp.		338	
<u>Cinygmula</u> sp.		518	
<u>Rhithrogena</u> sp.		55	
<u>Paraleptophlebia</u> sp.		37	
<u>Epeorus</u> <u>longimanus</u>		1	
<u>Ephemerella</u> <u>doddsi</u>		7	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>		2	
<u>Ephemerella</u> <u>hystrix</u>		42	
<u>Ephemerella</u> <u>infrequens</u>		13	TOTAL 1013

Plecoptera	848	2.0	
<u>Nemoura</u> <u>cinctipes</u>		748	
<u>Capnia</u> sp.		4	
<u>Pteronarcella</u> <u>badia</u>		1	
<u>Iso genus</u> sp.		7	
<u>Isoperla</u> sp.		9	
<u>Acro neuria</u> <u>pacifica</u>		31	
<u>Alloperla</u> sp.		36	TOTAL 836

Trichoptera	272	2.2	
<u>Arctopsyche</u> <u>grandis</u>		145	
<u>Glossosoma</u> sp.		65	
<u>Brachycentrus</u> sp.		5	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>		32	
<u>Rhyacophila</u> <u>repulsa</u>		18	
<u>Hydroptila</u> sp.		1	TOTAL 266

Diptera	237	0.3	
<u>Antocha</u> sp.		99	
<u>Dicranota</u> sp.		2	
Empididae #1		17	
Empididae #2		2	
Simuliidae		2	
<u>Pericoma</u> sp.		59	
<u>Brillia</u> sp.		1	
Orthoclad #2		26	
<u>Metriocnemius</u> sp.		6	
Pentaneurini Chironomidae		2	
Orthoclad Chironomidae		14	TOTAL 230

Coleoptera	69	T	
<u>Heterlimnius</u> sp (prob corpulentus)		64	
<u>Optioservus</u> sp		3	
<u>Zaitzevia</u> sp		1	
<u>Narpus</u> concolor		3	
<u>Brychius</u> sp		5	TOTAL 76

Annelida	36	0.4	
Lumbriculidae	} oligochaeta	15	
Naididae		21	TOTAL 36

Unknown 7 T
 moved to Coleoptera

Original Total 2475
 Final Total 2457

Identified & Enumerated by:
 Patricia Ann Mitchell

Blackfoot River at Dalton Mountain Rd. Bridge #1
 15 ft. 10-26-71 L. Spence

Ephemeroptera	540	1.2	
<u>Baetis</u> spp. (2 species)		76	
<u>Cinygmula</u> sp.		39	
<u>Rhythrogena</u> sp.		413	
<u>Ephemerella</u> <u>doddsi</u>		8	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>		8	
<u>Ephemerella</u> <u>infrequens</u>		8	TOTAL 552

Plecoptera	125	0.9	
<u>Nemoura</u> <u>cinctipes</u>		8	
<u>Pteronarcetta</u> <u>badia</u>		22	
<u>Isogenus</u> sp.		2	
<u>Capnia</u> sp.		2	
<u>Isoperla</u> sp.		2	
<u>Paraperla</u> <u>frontalis</u>		4	
<u>Alloperla</u> sp.		63	
<u>Brachyptera</u> sp.		3	
<u>Acroneuria</u> <u>pacifica</u>		8	
<u>Acroneuria</u> <u>californica</u>		1	TOTAL 116 115

Trichoptera	198	0.7	
<u>Hydropsyche</u> sp.		22	
<u>Arctopsyche</u> <u>grandis</u>		18	
<u>Brachycentrus</u> sp.		6	
<u>Glossosoma</u> sp.		148	
<u>Limnephilid</u> #2		2	
<u>Rhyacophila</u> <u>coloradensis</u>		1	TOTAL 197

Diptera	35	0.1	
<u>Antocha</u> sp.		5	
<u>Empididae</u> #1		1	
<u>Atherix</u> variegata		3	
<u>Simuliidae</u>		23	
Orthoclad Chironomidae		4	TOTAL 36

Coleoptera	4	T	
<u>Optoseruus</u> sp.		4	TOTAL 4

Nematoda	6	T	
Oligochaeta		1	
Nematoda		4	TOTAL 5

Cottus		1	
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Original total	908
	909
Final total	909
	906

Patricia Ann Mitchell
 Dept. Zoology
 University of Alberta
 Edmonton, Canada

Blackfoot River at Dalton Mountain Rd Bridge #2
1 sq ft. 10-26-71 L. Spence

Ephemeroptera	512	0.5	
<u>Baetis</u> spp.	39		
<u>Cinygmula</u> sp.	32		
<u>Rhythrogena</u> sp.	421		
<u>Paraleptophlebia</u> sp.	2		
<u>Ephemerella</u> <u>doddsi</u>	2		
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	4		
<u>Ephemerella</u> <u>hystrix</u>	2		
<u>Ephemerella</u> <u>infrequens</u>	12		TOTAL 514

Plecoptera	122	0.7	
<u>Nemoura</u> <u>cinctipes</u>	12		
<u>Pteronarcella</u> <u>badia</u>	13		
<u>Capnia</u> sp.	2		
<u>Isogenus</u> sp.	1		
<u>Isoperla</u> sp.	6		
<u>Brachyptera</u> sp.	2		
<u>Acroneuria</u> <u>pacifica</u>	19		
<u>Alloperla</u> sp.	63		TOTAL 118

Trichoptera	150	1.1	
<u>Hydropsyche</u> sp.	28		
<u>Arctopsyche</u> <u>grandis</u>	39		
<u>Glossosoma</u> sp.	55		
<u>Brachycentrus</u> sp.	18		
<u>Limnephilid</u> sp. 2	5		
<u>Rhyacophila</u> <u>coloradensis</u>	3		TOTAL 148

Leptera 17 T

Antocha sp. 7

Nematoma sp 1

Empididae #1 3

Simuliidae 5

Orthocentrus Chironomidae 1 TOTAL 17

Annelida 17 T

Oligochaeta 17 TOTAL 17

Original Total 818

Final Total 814

Patricia Ann Mitchell

Blackfoot River at Dalton Mountain Bridge #3

1 sq. ft.

10-26-71

L. Spence

Ephemeroptera	480	0.9	
<u>Baetis</u> spp. (2)		35	
<u>Cinygmula</u> sp.		59	
<u>Rhythrogena</u> sp.		552	
<u>Ephemerella</u> <u>doddsi</u>		7	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>		3	
<u>Ephemerella</u> <u>hystrix</u>		3	
<u>Ephemerella</u> <u>infrequens</u>		10	
<u>Ameletus</u> sp.		1	TOTAL 670

Plecoptera	97	0.8	
<u>Nemoura</u> <u>cinctipes</u>		9	
<u>Brachyptera</u> sp.		1	
<u>Pteronarcella</u> <u>badia</u>		5	
<u>Isoperla</u> sp.		9	
<u>Acroneuria</u> <u>pacifica</u>		22	
<u>Paraperla</u> <u>frontalis</u>		1	
<u>Alloperla</u> sp.		48	TOTAL 95

Trichoptera	163	1.0	
<u>Hydropsyche</u> sp.		20	
<u>Arctopsyche</u> <u>grandis</u>		35	
<u>Glossosoma</u> sp.		91	
<u>Brachycentrus</u> sp.		5	
<u>Rhyacophila</u> <u>coloradensis</u>		2	
<u>Limnephilid</u> #2		6	TOTAL 159

Hiptera	43	0.1	
<u>Antocha</u> sp.		19	
<u>Atherix</u> variegata		3	
Simuliidae		10	
Empididae #1		3	
<u>Pericoma</u> sp		3	
Orthoclad Chironomidae		3	TOTAL 41

Coleoptera	2	T	
<u>Optioservus</u> sp.		1	
<u>Heterlimnius</u> sp.		1	TOTAL 2

Nematoda	5	T	
Nematoda		5	TOTAL 5

Cottus	2
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Original Total	992
Final Total	977 972

Patricia Ann Mitchell
 Dept. Zoology
 University of Alberta
 Edmonton, Canada.

Blackfoot R. at Blackfoot Canyon Camp #1

10-26-71

159 ft

L. Spence

Ephemeroptera

520

0.8

<u>Baetis</u> sp. (one species)	36	
<u>Cinygmula</u> sp.	125	
<u>Rhythrogena</u> sp.	319	
<u>Ephemerella</u> <u>doddai</u>	2	
<u>Ephemerella</u> <u>infrequens</u>	42	
<u>Paraleptophlebia</u> sp.	2	TOTAL 526

Plecoptera

72

0.4

<u>Nemoura</u> <u>cinctipes</u>	2	
<u>Capnia</u> sp.	2	
<u>Isoperla</u> sp.	18	
<u>Brachyptera</u> sp.	4	
<u>Pteronarcella</u> <u>badia</u>	4	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parvula</u>	4	
<u>Acroneuria</u> <u>pacifica</u>	4	
<u>Alloperla</u> sp.	32	TOTAL 72

Trichoptera

122

0.2

<u>Hydropsyche</u> sp.	67	
<u>Arctopsyche</u> <u>grandis</u>	3	
<u>Glossosoma</u> sp.	43	
<u>Brachycentrus</u> sp.	2	
<u>Limnephilidae</u> #1	7	TOTAL 122

DIPTERA 24 0.1

Hexatoma sp. 9

Antocha sp. 1

Atherix variegata 7

Simuliidae 3

Orthoclad #2 2

Other orthocladinae 2 TOTAL 24

COLEOPTERA 1 T

Optioversus sp. 1 TOTAL 1

UNKNOWN 3 T

Nematoda 3 TOTAL 3

ANNELIDA 26 T

Oligochaeta 26 TOTAL 26

COTTUS 1 T

ORIGINAL TOTAL 769

FINAL TOTAL ~~775~~
774

Patricia Ann Mitchell

Blackfoot R. at Blackfoot Canyon Camp #2

10-26-71

153 ft.

L. Spence

Ephemeroptera

575

0.9

Baetis sp. 53

Cinygmula sp. 151

Rhithrogena sp. 278

Ephemerella doddsi 1

E. grandis ingens 1

E. infrequens 76

Paraleptophlebia sp. 4

Sub-adult (prob. one of above species) 1 TOTAL 565

Plecoptera

104

0.7

Nemoura cinetipes 19

Capnia sp. 4

Brachyptera sp. 8

Pteronarcissa badia 9

Isoperla sp. 29

Acroncuria pacifica 8

Alloperla sp. 30 TOTAL 107

Trichoptera

324

1.0

Hydropsyche sp. 234

Arctopsyche grandis 25

Glossosoma sp. 44

Brachycentrus sp. 14 TOTAL 317

Diptera 30 0.2

Hexatoma sp. 7

Atherix variegata 10

Simuliidae 8

Orthoclad #2 1

Other Chironomidae 3 TOTAL 29

COLEOPTERA 2 T

Zaitzevia sp. 1

Optoserenus sp. 1 TOTAL 2

ANNELIDA 23 T

Aligochaeta 23 TOTAL 23

UNKNOWN 3 T

Nematoda 3 TOTAL 3

Original TOTAL 1061

Final TOTAL 1046

Patricia Ann Mitchell
Dept Zoology
University of Alberta
Edmonton

Blackfoot River at Blackfoot Canyon Camp #3

10-26-71

1 sq. ft.

L. Spence

Ephemeroptera 344 0.5

Baetis sp. 37

Cinygmula sp. 71

Rhithrogena sp. 170

Ephemerella infrequens 52

Paraleptophlebia sp. 1 TOTAL 331

Plecoptera 71 0.4

Nemoura cinctipes 3

Pteronarcella badia 8

Brachyptera sp. 9

Isoperla sp. 18

Paraperla frontalis 2

Alloperla sp. 26

Acroneuria pacifica 4 TOTAL 70

Trichoptera 223 0.4

Hydropsyche sp. 154

Arctopsyche grandis 20

Brachycentrus sp. 4

Glossosoma sp. 45

Lepidostoma sp. 1 TOTAL 224

Niptera	31	0.2	
<u>Hexatoma</u> sp.		9	
<u>Antocha</u> sp.		3	
<u>Atherix variegata</u>		11	
<u>Dicranota</u> sp.		1	
Simuliidae		5	
Orthoclad #2		1	TOTAL 30

Nematoda	9	T	
Nematoda		2	TOTAL 2

Oligochaeta		7	TOTAL 7
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Cottus sp.	1	T	
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Original TOTAL 679

Final Total ~~665~~
664

Patricia Ann Mitchell
Dept Zoology
University of Alberta
20 May 1974

BLACKFOOT RIVER AT FLESHER PASS ROAD BRIDGE #1
10-19-71
1 sq. ft. 1245 L. Spence

EPHEMEROPTERA 22 T

<u>Baetis</u> sp.	16		
<u>Cinygmula</u> sp.	5	Total	21

PLECOPTERA 130 0.2

<u>Nemoura</u> <u>cinctipes</u>	21		
<u>Capnia</u> sp.	2		
<u>Leuctra</u> sp.	20		
<u>Isogenus</u> sp.	5		
<u>Acroneuria</u> sp.			
<u>Alloperla</u> sp.	79		
<u>Paraperla</u> <u>frontalis</u>	2	Total	131

TRICHOPTERA 49 0.1

<u>Hydropsyche</u> sp.	13		
<u>Brachycentrus</u> sp.	34		
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	1		
<u>Limnephilid</u> #2	1	Total	49

DIPTERA 161 0.1

<u>Antocha</u> sp.	88		
<u>Pericoma</u> sp.	64		
Tanypodinae	4		
Orthoclads	2	Total	158

Original Total 362

Final Total 359

BLACKFOOT RIVER AT FLESHER PASS ROAD BRIDGE #2
10-19-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 60 T

<u>Baetis</u> sp.	40	
<u>Cinygmula</u> sp.	15	Total 55

PLECOPTERA 145 0.6

<u>Nemoura cinctipes</u>	34	
<u>Capnia</u> sp.	6	
<u>Leuctra</u> sp.	11	
<u>Arcynopteryx parallela</u> or <u>curvata</u>	2	
<u>Isogenus</u> sp.	6	
<u>Acroneuria pacifica</u>	2	
<u>Claassenia sabulosa</u>	2	
<u>Alloperla</u> sp.	81	Total 144

TRICHOPTERA 54 0.1

<u>Hydropsyche</u> sp.	14	
<u>Arctopsyche grandis</u>	1	
<u>Glossosoma</u> sp.	1	
<u>Rhyacophila acropedes</u> or <u>vao</u>	2	
<u>Brachycentrus</u> sp.	33	
<u>Limnephilidae</u> #2	2	
<u>Hydroptila</u> sp.	1	Total 54

DIPTERA 137 0.2

<u>Antocha</u> sp.	72	
<u>Pericoma</u> sp.	59	
<u>Orthoclad chironomidae</u> (several species)	3	
<u>Tanytarsini chironomidae</u> (one species)	1	Total 135

UNKNOWN 2 T

Nematoda	2	Total 2
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Original Total 398

Final Total 390

Enumerated and Identified by
/s/ Patricia Ann Mitchell
Department Zoology
University of Alberta

BLACKFOOT RIVER AT FLESHER PASS ROAD BRIDGE #3

10-19-71

1 sq. ft.

1300

L. Spence

EPHEMEROPTERA 149 T

<u>Baetis</u> sp.	101	
<u>Cinygmula</u> sp.	37	
<u>Ephemerella</u> <u>intrequeus</u>	3	Total 141

PLECOPTERA

<u>Nemoura</u> <u>cinctipes</u>	26	
<u>Capnia</u> sp.	20	
<u>Leuctra</u> sp.	15	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	1	
<u>Isogenus</u> sp.	4	
<u>Isoperla</u> sp.	2	
<u>Acroneuria</u> <u>pacifica</u>	3	
<u>Claassenia</u> <u>sabulosa</u>	2	
<u>Paraperla</u> <u>frontalis</u>	4	
<u>Alloperla</u> sp.	83	Total 160

TRICHOPTERA 45 0.1

<u>Hydropsyche</u> sp.	3	
<u>Arctopsyche</u> <u>grandis</u>	1	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	3	
<u>Rhyacophila</u> <u>coloradensis</u>	2	
<u>Glossosoma</u> sp.	1	
<u>Brachycentrus</u> sp.	35	Total 45

DIPTERA 313 0.3

<u>Hexatoma</u> sp.	5	
<u>Dicranota</u> sp.	4	
<u>Antocha</u> sp.	191	
<u>Empididae</u> #1	1	
<u>Pericoma</u> sp.	85	
<u>Tanypodinae</u> <u>chironomidae</u> (prob. 1 species)	4	
<u>Orthoclad</u> <u>chironomidae</u> (several species)	27	Total 317

ANNELIDA 2 T

<u>Oligochaeta</u>	2	Total 2
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Original Total 674

Final Total 665

/s/ Patricia Ann Mitchell

ALICE CREEK AT HIGHWAY 200 #1

10-19-71

1 sq. ft.

1315

L. Spence

EPHEMEROPTERA 290 0.5

<u>Baetis</u> spp.	69	
<u>Cinygmula</u> sp.	111	
<u>Rhithrogena</u> sp.	21	
<u>Ephemerella grandis ingens</u>	10	
<u>E. infrequens</u>	57	
<u>E. cloddsi</u>	12	
<u>Paraleptophlebia</u> sp.	19	Total 299

PLECOPTERA 145 0.5

<u>Nemoura cinctipes</u>	15	
<u>Capnia</u> sp.	12	
<u>Isogenus</u> sp.	8	
<u>Alloperla</u> sp.	91	
<u>Acroneuria pacifica</u>	4	
<u>Acroneuria californica</u>	1	Total 131

TRICHOPTERA 269 0.9

<u>Hydropsyche</u> sp.	146	
<u>Arctopsyche grandis</u>	7	
<u>Glossosoma</u> sp.	64	
<u>Brachycentrus</u> sp.	19	
<u>Rhyacophila vao</u> or <u>acropedes</u>	5	
<u>R. vepulsa</u>	1	
pupae	2	
(pupae usually are same as above larvae)		Total 244

DIPTERA 465 T + 42

<u>Hexatoma</u> sp.	5	
<u>Antocha</u> so.	131	
<u>Pericoma</u> sp.	152	
<u>Orthoclad</u> #2 (one easily recog- nizable species that lives in the blue-green alga <u>Nostoc</u>)	162	
Other <u>Orthocladinae</u>	40	
<u>Tanytarsini</u>	1	
<u>Brillia</u> sp.	1	Total 492

COLEOPTERA 73 0.1

<u>Optioservus</u> sp.	38	
<u>Heterlimnius</u> sp.	18	
<u>Zactzevia</u> sp.	17	Total 73

ANNELIDA 2 T

<u>Oligochaeta</u> - family <u>Naididae</u>	2	Total 2
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Original Total 1286

Final Total 1241

/s/ Patricia Ann Mitchell
May 8 1972

ALICE CREEK AT HIGHWAY 200 #2

10-19-71

1 sq. ft.

1330

L. Spence

EPHEMEROPTERA 210 0.4

<u>Baetis</u> sp.	69	
<u>Cinygmula</u> sp.	51	
<u>Rhithrogena</u> sp.	2	
<u>Ephemerella grandis ingens</u>	10	
<u>E. infrequens</u>	61	
<u>E. doddsi</u>	8	
<u>E. tibialis</u>	1	
<u>Paraleptophlebia</u> sp.	5	Total 207

PLECOPTERA 110 0.1

<u>Nemoura cinctipes</u>	56	
<u>Capnia</u> sp.	5	
<u>Isogenus</u> sp.	15	
<u>Acroneuria</u> sp. (small)	1	
<u>Alloperla</u> sp.	26	
<u>Arcynopteryx curvata</u> or <u>parallela</u>	1	Total 104

TRICHOPTERA 318 1.9

<u>Hydropsyche</u> sp.	158	
<u>Arctopsyche grandis</u>	18	
<u>Glossosoma</u> sp.	37	
<u>Brachycentrus</u> sp.	56	
<u>Rhyacophila acropedes</u> or <u>vao</u>	33	
<u>R. vepulsa</u>	1	
<u>Chimarra</u> sp.	9	
<u>Limnephilidae</u> sp. 2	1	
pupae	3	Total 316

DIPTERA 411 0.2 + 60

<u>Hexatoma</u> sp.	3	
<u>Antocha</u> sp.	129	
<u>Pericoma</u> sp.	106	
<u>Orthoclad</u> #2	137	
other orthocladinae	17	
<u>Brillia</u> sp.	1	
<u>Simuludae</u>	2	+60
<u>Empididae</u>	3	Total 458

COLEOPTERA 38 T

<u>Optioservus</u> sp.	30	
<u>Heterlimnius</u> sp.	5	
<u>Zactzevia</u> sp.	3	Total 38

UNKNOWN 1 T

Nematoda	1	Total 1
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Original Total 1148

Final Total 1124

ALICE CREEK AT HIGHWAY 200 #3

10-19-71

1 sq. ft.

L. Spence

EPHEMEROPTERA 275 0.5

<u>Baetis</u> spp. (2 species present)	35	
<u>Cinygmula</u> sp.	106	
<u>Rhithrogena</u> sp.	7	
<u>Ephemerella</u> <u>doddsi</u>	11	
<u>E. grandis</u> <u>ingens</u>	24	
<u>E. infrequens</u>	72	
<u>E. spinifera</u>	1	
<u>E. tibialis</u>	1	
<u>Paraleptophlebia</u> sp.	12	Total 269

PLECOPTERA 119 0.3

<u>Nemoura</u> <u>cinctipes</u>	6	
<u>Capnia</u> sp.	8	
<u>Isogenus</u> sp.	20	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	4	
<u>Acroneuria</u> sp. (prob. <u>pacifica</u>)	3	
<u>Alloperla</u> sp.	69	
Small <u>Chloroperlidae</u> (maybe <u>paraperla</u> <u>frontalis</u> - too small to be sure)	5	Total 115

TRICHOPTERA 344 0.8

<u>Hydropsyche</u> sp.	116	
<u>Arctopsyche</u> <u>grandis</u>	5	
<u>Glossosoma</u> sp.	136	
<u>Brachycentrus</u> sp.	58	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	12	
<u>R. vepulsa</u>	2	
<u>Limnephilidae</u> #1	4	
pupae	2	Total 335

DIPTERA 700 0.2 + 107

<u>Hexatoma</u> sp.	1	
<u>Antocha</u> sp.	158	
<u>Empididae</u> #1	4	
<u>Pericoma</u> sp.	223	
<u>Orthoclad</u> #2	360 (including those in <u>Nostoc</u>)	
other orthoclad chironomidae	58	
<u>Brillia</u> sp.	3	
<u>Metriocnemius</u> sp.	2	
<u>Tanytarsini</u>	1	Total 810

COLEOPTERA 60 T

<u>Optioservus</u> sp.	39	
<u>Zactzevia</u> sp.	6	
<u>Heterlimnius</u> sp.	15	Total 60

COTTUS 1 T

Original Total 1606

Final Total 1589

/s/ Patricia Ann Mitchell

(con'd)

COLEOPTERA 110 0.1

<u>Optioservus</u> sp.	59	
<u>Zaitzevia</u> sp.	43	
<u>Heterlimnius</u> sp.	5	
<u>Narpus</u> sp.	4	Total 111

NEMATODA 1 T

Nematoda	1	Total 1
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Original Total 2512

Final Total 2723
(including 219 in Nostoc)

/s/ Patricia Ann Mitchell

BLACKFOOT RIVER AT HOGUM CREEK ROAD BRIDGE #1

1 sq. ft.

10-26-71

L. Spence

EPHEMEROPTERA 208 0.1

<u>Baetis</u> spp. (seems to be 2)	57	
<u>Cinygmula</u> sp.	74	
<u>Ephemerella infrequens</u>	124	
<u>Paraleptophlebia</u> sp.	6	Total 261

PLECOPTERA 128 0.1

<u>Nemoura cinctipes</u>	17	
<u>Capnia</u> sp.	3	
<u>Isoperla</u> sp.	6	
<u>Isogenus</u> sp.	3	
<u>Alloperla</u> sp.	44	
<u>Acroneturia</u> sp. (too small to distinguish species)	1	Total 74

TRICHOPTERA 478 0.8

<u>Hydropsyche</u> sp.	336	
<u>Glossosoma</u> sp.	64	
<u>Brachycentrus</u> sp.	9	
<u>Rhyacophila acropedes</u> or <u>vao</u>	16	
<u>Rhyacophila coloradensis</u>	8	
Limnephilid #2	7	
Limnephilidae (one species, tiny)	5	
<u>Lepidostoma</u> sp.	25	
pupae (probably same species as above)	2	Total 472

DIPTERA 2120 1.1

<u>Antocha</u> sp.	69	
<u>Pericoma</u> sp.	113	
<u>Empididae</u> #1	7	
Tanytarsini (type of Chironomid)	1	
Orthoclad #2 (Nostoc-type)	1898	
Other Orthoclad Chironomids	7	Total 2095

COLEOPTERA 62 0.1

<u>Optioservus</u> sp.	43	
<u>Zaitzevia</u> sp.	19	Total 62

NEMATODA 4 T

Nematoda	4	Total 4
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Original Total 3000

Final Total 2968

/s/ Patricia Ann Mitchell
May 22, 1974

BLACKFOOT RIVER AT HOGUM CREEK ROAD BRIDGE #2
11-1-71

1 sq. ft.

L. Spence

Ephemeroptera 705 0.6

<u>Baetis</u> sp.	147	
<u>Cinygmula</u> sp.	328	
<u>Rhithrogena</u> sp.	10	
<u>Ephemerella infrequens</u>	208	
<u>E. grandis ingens</u>	2	
<u>E. hystrix</u>	1	
<u>Paraleptophlebia</u> sp.	4	Total 700

Plecoptera 177 0.9

<u>Nemoura cinctipes</u>	12	
<u>Capnia</u> sp.	2	
<u>Isogenus</u> sp.	3	
<u>Isoperla</u> sp.	12	
<u>Claassenia sabulosa</u>	14	
<u>Acroneuria</u> sp. (may be 2 species - very small, prob. <u>pacifica</u>)	17	
<u>Alloperla</u> sp.	112	Total 172

Trichoptera 784 1.9

<u>Hydropsyche</u> sp.	584	
<u>Arctopsyche grandis</u>	1	
<u>Glossosoma</u> sp.	106	
<u>Brachycentrus</u> sp.	20	
<u>Rhyacophila coloradensis</u> (in former samples called <u>Rhyacophila</u> sp.)	10	
<u>R. acropedes</u> or <u>vao</u>	5	
<u>Lepidostoma</u> sp.	38	
Limmephilid #2	12	
Limmephilid #1	1	
Other Limmephilidae (all same species but not #1 or #2)	5	
pupae	5	Total 787

Diptera 735 1.2

<u>Hexatoma</u> sp.	2	
<u>Antocha</u> sp.	28	
Simuliidae	1	
Empididae #1	1	
<u>Pericoma</u> sp.	140	
<u>Orthoclad</u> #2 (including those in alga <u>Nostoc</u>)	774	
Tanytarsini (chironomidae)	1	
Tanypodinae (chironomidae)	1	
<u>Orthoclad</u> chironomidae	4	Total 952

BLACKFOOT RIVER AT HOGUM CREEK ROAD #3

1 sq. ft.

11-1-71

L. Spence

EPHEMEROPTERA 381 0.2

<u>Baetis</u> spp. (2 species)	54	
<u>Cinygmula</u> sp.	126	
<u>Rhithrogena</u> sp.	2	
<u>Ephemerella infrequens</u>	197	
<u>E. grandis ingens</u>	2	Total 381

PLECOPTERA 95 0.2

<u>Nemoura cinctipes</u>	9	
<u>Capnia</u> sp.	3	
<u>Isogenus</u> sp.	7	
<u>Isoperla</u> sp.	3	
<u>Claassenia sabulosa</u>	1	
<u>Acroneuria</u> sp.	9	
<u>Alloperla</u> sp.	61	Total 93

TRICHOPTERA 750 1.7

<u>Hydropsyche</u> sp.	478	
<u>Arctopsyche grandis</u>	8	
<u>Glossosoma</u> sp.	159	
<u>Brachycentrus</u> sp.	57	
<u>Rhyacophila coloradensis</u>	3	
<u>R. acropedes</u> or <u>vao</u>	5	
<u>Limnephilid</u> #2	10	
other <u>Limnephilidae</u>	5	
<u>Lepidostoma</u> sp.	20	Total 745

DIPTERA 999 0.4

<u>Hexatoma</u> sp.	3	
<u>Dicranota</u> sp.	1	
<u>Simuliidae</u>	1	
<u>Antocha</u> sp.	54	
<u>Pericoma</u> sp.	73	
<u>Orthoclad</u> #2	860	
<u>Orthoclads</u>	5	
<u>Tanytarsini</u>	1	Total 998

COLEOPTERA 83 0.1

<u>Optioservus</u> sp.	59	
<u>Zaitzevia</u> sp.	16	
<u>Heterlimnius</u> sp.	2	
<u>Cleptelmis ornata</u>	1	Total 78

NEMATODA 6 T

Nematoda	6	Total 6
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Original Total 2301

Final Total 2301

POORMAN CREEK #1

1 sq. ft. 11-2-71

L. Spence

EPHEMEROPTERA 990 0.8

<u>Baetis</u> spp. (2 species)	367	
<u>Cinygmula</u> sp.	502	
<u>Rhithrogena</u> so.	53	
<u>Ameletus</u> sp.	1	
<u>Paraleptophlebia</u> sp.	5	
<u>Ephemerella</u> <u>doddsi</u>	2	
<u>Ephemerella</u> <u>grandis ingens</u>	2	
<u>Ephemerella</u> <u>hystrix</u>	40	
<u>Ephemerella</u> <u>infrequens</u>	6	Total 978

PLECOPTERA 839 3.0

<u>Nemoura</u> <u>cinctipes</u>	756	
<u>Brachyptera</u> sp.	4	
<u>Pteronarcella</u> <u>badia</u>	1	
<u>Capnia</u> sp.	2	
<u>Isogenus</u> sp.	8	
<u>Isoperla</u> sp.	7	
<u>Acroneuria</u> <u>pacifica</u>	31	
<u>Alloperla</u> sp.	43	Total 852

TRICHOPTERA 199 1.9

<u>Hydropsyche</u> sp.	2	
<u>Arctopsyche</u> <u>grandis</u>	98	
<u>Glossosoma</u> sp.	52	
<u>Brachycentrus</u> sp.	1	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	19	
<u>Rhyacophila</u> <u>repulsa</u>	17	
Limnephilidae unknown	1	
<u>Lepidostoma</u> sp.	4	
<u>Tinodes</u> sp.	1	Total 195

DIPTERA 227 0.2

<u>Antocha</u> sp.	91	
Simuliidae	2	
Empididae #1	14	
<u>Dicranota</u> sp.	2	
<u>Pericoma</u> sp.	52	
Orthoclad #2 (Nostoc-type)	25	
<u>Metriocnemius</u> sp.	5	
Orthoclad Chironomidae	29	Total 220

(con'd)

COLEOPTERA 80 0.1

<u>Optioservus</u> sp.	3		
<u>Heterlimnius</u> sp.	77		
<u>Zaitzevia</u> sp.	1		
<u>Narpus</u> sp.	2		
<u>Brychius</u> sp. (Hydrophilid beetle larvae)	9	Total	92

ANNELIDA 16 0.1

Oligochaeta	10		
Nematoda	6	Total	16

UNKNOWN 10 T

moved to Coleoptera

Original Total 2361

Final Total 2353

POORMAN CREEK #2

1 sq. ft. 11-2-71

L. Spence

EPHEMEROPTERA 823 0.9

<u>Baetis</u> spp.	332	
<u>Cinygmula</u> sp.	361	
<u>Rhithrogena</u> sp.	36	
<u>Paraleptophlebia</u> sp.	17	
<u>Ephemerella</u> <u>doddsi</u>	5	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	4	
<u>Ephemerella</u> <u>hystrix</u>	43	
<u>Ephemerella</u> <u>infrequens</u>	14	Total 812

PLECOPTERA 780 2.1

All Plecoptera dried up Total 780

TRICHOPTERA

<u>Hydropsyche</u> sp.	3	
<u>Arctopsyche</u> <u>grandis</u>	116	
<u>Glossosoma</u> sp.	47	
<u>Brachycentrus</u> sp.	3	
<u>Rhyacophila</u> <u>acropedes</u> or <u>vao</u>	29	
<u>Rhyacophila</u> <u>vepalsa</u>	18	
<u>Hydroptila</u> sp.	4	Total 220

DIPTERA 431 0.5

<u>Antocha</u> sp.	150	
<u>Dicranota</u> sp.	3	
<u>Simuliidae</u>	5	
<u>Empididae</u> #1	24	
<u>Empididae</u> #2	1	
<u>Pericoma</u> sp.	72	
<u>Orthoclad</u> #2	139	
<u>Brillia</u> sp.	6	
<u>Metriocnemius</u> sp.	3	
<u>Orthoclad</u> Chironomidae (other than #2)	23	Total 426

COLEOPTERA 41 0.1

<u>Heterlimnius</u> sp. (prob. <u>corpulentus</u>)	40	
<u>Optioservus</u> sp.	1	
<u>Narpus</u> <u>concolor</u>	2	
<u>Brychius</u> sp.	7	

ANNELIDA 49 0.3

<u>Lumbriculidae</u>	} Oligochaeta	5	
<u>Naididae</u>		44	Total 49

UNKNOWN 9 T

Moved to Coleoptera

Original Total 2355

Final Total 2337

POORMAN CREEK #3

1 sq. ft. 11-2-71 L. Spence

EPHEMEROPTERA 1006 1.1

<u>Baetis</u> spp.	338	
<u>Cinygmula</u> sp.	518	
<u>Rhithrogena</u> sp.	55	
<u>Paraleptophlebia</u> sp.	37	
<u>Epeorus longimanus</u>	1	
<u>Ephemerella doddsi</u>	7	
<u>Ephemerella grandis ingens</u>	2	
<u>Ephemerella hystrix</u>	42	
<u>Ephemerella infrequens</u>	13	Total 1013

PLECOPTERA 848 2.0

<u>Nemoura cinctipes</u>	748	
<u>Capnia</u> sp.	4	
<u>Pteronarcella badia</u>	1	
<u>Isogenus</u> sp.	7	
<u>Isoperla</u> sp.	9	
<u>Acroneuria pacifica</u>	31	
<u>Alloperla</u> sp.	36	Total 836

TRICHOPTERA 272 2.2

<u>Arctopsyche grandis</u>	145	
<u>Glossosoma</u> sp.	65	
<u>Brachycentrus</u> sp.	5	
<u>Rhyacophila acropedes</u> or <u>vao</u>	32	
<u>Rhyacophila vepulsa</u>	18	
<u>Hydroptila</u> sp.	1	Total 266

DIPTERA 237 0.3

<u>Antocha</u> sp.	99	
<u>Dicranota</u> sp.	2	
<u>Empididae</u> #1	17	
<u>Empididae</u> #2	2	
<u>Simuliidae</u>	2	
<u>Pericoma</u> sp.	59	
<u>Brillia</u> sp.	1	
<u>Orthoclad</u> #2	26	
<u>Metriocnemius</u> sp.	6	
<u>Pentaneurini Chironomidae</u>	2	
<u>Orthoclad Chironomidae</u>	14	Total 230

(con'd)

COLEOPTERA 69 T

<u>Heterlimnius</u> sp.			
(prob. corpulentus)	64		
<u>Optioservus</u> sp.	3		
<u>Zaitzevia</u> sp.	1		
<u>Narpus</u> <u>concolor</u>	3		
<u>Brychius</u> sp.	5	Total	76

ANNELIDA 36 0.4

Lumbriculidae	} Oligochaeta	15	
Naididae		21	Total 36

UNKNOWN 7 T

Moved to Coleoptera

Original Total 2475

Final Total 2457

/s/ Patricia Ann Mitchell

BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE #1

1 sq. ft.

10-26071

L. Spence

EPHEMEROPTERA 540 1.2

<u>Baetis</u> spp. (2 species)	76	
<u>Cinygmula</u> sp.	39	
<u>Rhithrogena</u> sp.	413	
<u>Ephemerella</u> <u>doddsi</u>	8	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	8	
<u>Ephemerella</u> <u>infrequens</u>	8	Total 552

PLECOPTERA 125 0.9

<u>Nemoura</u> <u>cinctipes</u>	8	
<u>Pteronarcella</u> <u>badia</u>	22	
<u>Isogenus</u> sp.	2	
<u>Capnia</u> sp.	2	
<u>Isoperla</u> sp.	2	
<u>Paraperla</u> <u>frontalis</u>	4	
<u>Alloperla</u> sp.	63	
<u>Brachyptera</u> sp.	3	
<u>Acroneuria</u> <u>pacifica</u>	8	
<u>Acroneuria</u> <u>californica</u>	1	Total 115

TRICHOPTERA 198 0.7

<u>Hydropsyche</u> sp.	22	
<u>Arctopsyche</u> <u>grandis</u>	18	
<u>Brachycentrus</u> sp.	6	
<u>Glossosoma</u> sp.	148	
<u>Limnephilid</u> #2	2	
<u>Rhyacophila</u> <u>coloradensis</u>	1	Total 197

DIPTERA 35 0.1

<u>Antocha</u> sp.	5	
<u>Empididae</u> #1	1	
<u>Atherix</u> <u>variegata</u>	3	
<u>Simuliidae</u>	23	
<u>Orthoclad</u> <u>Chironomidae</u>	4	Total 36

COLEOPTERA 4 T

<u>Optioservus</u> sp.	4	Total 4
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NEMATODA 6 T

<u>Oligochaeta</u>	1	
<u>Nematoda</u>	4	Total 5

COTTUS 1

Original Total 908

Final Total 909

/s/ Patricia Ann Mitchell

BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE #2

1 sq. ft.

10-26-71

L. Spence

EPTHEMEROPTERA 512 0.5

<u>Baetis</u> spp.	39	
<u>Cinygmula</u> sp.	32	
<u>Rhithrogena</u> sp.	421	
<u>Paraleptophlebia</u> sp.	2	
<u>Ephemerella</u> <u>doddsi</u>	2	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	4	
<u>Ephemerella</u> <u>hystrix</u>	2	
<u>Ephemerella</u> <u>infrequens</u>	12	Total 514

PLECOPTERA 122 0.7

<u>Nemoura</u> <u>cinctipes</u>	12	
<u>Pteronarcella</u> <u>badia</u>	13	
<u>Capnia</u> sp.	2	
<u>Isogenus</u> sp.	1	
<u>Isoperla</u> sp.	6	
<u>Brachyptera</u> sp.	2	
<u>Acroneuria</u> <u>pacifica</u>	19	
<u>Alloperla</u> sp.	63	Total 118

TRICHOPTERA 150 1.1

<u>Hydropsyche</u> sp.	28	
<u>Arctopsyche</u> <u>grandis</u>	39	
<u>Glossosoma</u> sp.	55	
<u>Brachycentrus</u> sp.	18	
<u>Limnephilid</u> sp. 2	5	
<u>Rhyacophila</u> <u>coloradensis</u>	3	Total 148

DIPTERA 17 T

<u>Antocha</u> sp.	7	
<u>Hexatoma</u> sp.	1	
<u>Empididae</u> #1	3	
<u>Simuliidae</u>	5	
<u>Orthoclad</u> <u>Chironomidae</u>	1	Total 17

ANNELIDA 17 T

<u>Oligochaeta</u>	17	Total 17
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Original Total 818

Final Total 814

/s/ Patricia Ann Mitchell

BLACKFOOT RIVER AT DALTON MOUNTAIN BRIDGE #3

1 sq. ft. 10-26-71 L. Spence

EPHEMEROPTERA 680 0.9

<u>Baetis</u> spp. (2)	35	
<u>Cinygmula</u> sp.	59	
<u>Rhithrogena</u> sp.	552	
<u>Ephemerella</u> <u>doddsi</u>	7	
<u>Ephemerella</u> <u>grandis</u> <u>ingens</u>	3	
<u>Ephemerella</u> <u>hystrix</u>	3	
<u>Ephemerella</u> <u>infrequens</u>	10	
<u>Ameletus</u> sp.	1	Total 670

PLECOPTERA 97 0.8

<u>Nemoura</u> <u>cinctipes</u>	9	
<u>Brachyptera</u> sp.	1	
<u>Pteronarcella</u> <u>badia</u>	5	
<u>Isoperla</u> sp.	9	
<u>Acroneuria</u> <u>pacifica</u>	22	
<u>Paraperla</u> <u>frontalis</u>	1	
<u>Alloperla</u> sp.	48	Total 95

TRICHOPTERA 163 1.0

<u>Hydropsyche</u> sp.	20	
<u>Arctopsyche</u> <u>grandis</u>	35	
<u>Glossosoma</u> sp.	91	
<u>Brachycentrus</u> sp.	5	
<u>Rhyacophila</u> <u>coloradensis</u>	2	
<u>Limnephilid</u> #2	6	Total 159

DIPTERA 43 0.1

<u>Antocha</u> sp.	19	
<u>Atherix</u> <u>variegata</u>	3	
<u>Simuliidae</u>	10	
<u>Empididae</u> #1	3	
<u>Pericoma</u> sp.	3	
<u>Orthoclad</u> Chironomidae	3	Total 41

COLEOPTERA 2 T

<u>Optioservus</u> sp.	1	
<u>Heterlimnius</u> sp.	1	Total 2

NEMATODA 5 T

Nematoda	5	Total 5
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COTTUS 2

Original Total 992

Final Total 972

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #1

1 sq. ft.

10-26-71

L. Spence

EPHEMEROPTERA 520 0.8

<u>Baetis</u> sp. (one species)	36	
<u>Cinygmula</u> sp.	125	
<u>Rhithrogena</u> sp.	319	
<u>Ephemerella</u> <u>doddsi</u>	2	
<u>Ephemerella</u> <u>infrequens</u>	42	
<u>Paraleptophlebia</u> sp.	2	Total 526

PLECOPTERA 72 0.4

<u>Nemoura</u> <u>cinctipes</u>	2	
<u>Capnia</u> sp.	2	
<u>Isoperla</u> sp.	18	
<u>Brachyptera</u> sp.	4	
<u>Pteronarcella</u> <u>badia</u>	6	
<u>Arcynopteryx</u> <u>curvata</u> or <u>parallela</u>	4	
<u>Acroneuria</u> <u>pacifica</u>	4	
<u>Alloperla</u> sp.	32	Total 72

TRICHOPTERA 122 0.2

<u>Hydropsyche</u> sp.	67	
<u>Arctopsyche</u> <u>grandis</u>	3	
<u>Glossosoma</u> sp.	43	
<u>Brachycentrus</u> sp.	2	
Limnephilidae #1	7	Total 122

DIPTERA 24 0.1

<u>Hexatoma</u> sp.	9	
<u>Antocha</u> sp.	1	
<u>Atherix</u> <u>variegata</u>	7	
Simuliidae	3	
Orthoclad #2	2	
Other Orthocladinae	2	Total 24

COLEOPTERA 1 T

<u>Optioservus</u> sp.	1	Total 1
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UNKNOWN 3 T

Nematoda	3	Total 3
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ANNELIDA 26 T

Oligochaeta	26	Total 26
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COTTUS 1 T

Original Total 769

Final Total 774

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #2

1 sq. ft. 10-26-71 L. Spence

Ephemeroptera 575 0.9

<u>Baetis</u> sp.	53	
<u>Cinygmula</u> sp.	151	
<u>Rhithrogena</u> sp.	278	
<u>Ephemerella</u> <u>doddsi</u>	1	
<u>E. grandis</u> <u>ingens</u>	1	
<u>E. infrequens</u>	76	
<u>Paraleptophlebia</u> sp.	4	
Sub-adult (prob. one of above species)	1	Total 565

Plecoptera 104 0.7

<u>Nemoura</u> <u>cinctipes</u>	19	
<u>Capnia</u> sp.	4	
<u>Brachyptera</u> sp.	8	
<u>Pteronarcella</u> <u>badia</u>	9	
<u>Isoperla</u> sp.	29	
<u>Acroneuria</u> <u>pacifica</u>	8	
<u>Alloperla</u> sp.	30	Total 107

Trichoptera 324 1.0

<u>Hydropsyche</u> sp.	234	
<u>Arctopsyche</u> <u>grandis</u>	25	
<u>Glossosoma</u> sp.	44	
<u>Brachycentrus</u> sp.	14	Total 317

Diptera 30 0.2

<u>Hexatoma</u> sp.	7	
<u>Atherix</u> <u>variegata</u>	10	
<u>Simuliidae</u>	8	
Orthoclad #2	1	
Other Chironomidae	3	Total 29

Coleoptera 2 T

<u>Zaitzevia</u> sp.	1	
<u>Optioservus</u> sp.	1	Total 2

Annelida 23 T

Oligochaeta	23	Total 23
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Unknown 3 T

Nematoda	3	Total 3
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Original Total 1061 Final Total 1046

/s/ Patricia Ann Mitchell

BLACKFOOT RIVER AT BLACKFOOT CANYON CAMP #3

1 sq. ft. 10-26-71 L. Spence

EPHEMEROPTERA 344 0.5

<u>Baetis</u> sp.	37	
<u>Cinygmula</u> sp.	71	
<u>Rhithrogena</u> sp.	170	
<u>Ephemerella infrequens</u>	52	
<u>Paraleptophlebia</u> sp.	1	Total 331

PLECOPTERA 71 0.4

<u>Nemoura cinctipes</u>	3	
<u>Pteronarcella badia</u>	8	
<u>Brachyptera</u> sp.	9	
<u>Isoperla</u> sp.	18	
<u>Paraperla frontalis</u>	2	
<u>Alloperla</u> sp.	26	
<u>Acroneuria pacifica</u>	4	Total 70

TRICHOPTERA 223 0.4

<u>Hydropsyche</u> sp.	154	
<u>Arctopsyche grandis</u>	20	
<u>Brachycentrus</u> sp.	4	
<u>Glossosoma</u> sp.	45	
<u>Lepidostoma</u> sp.	1	Total 224

DIPTERA 31 0.2

<u>Hexatoma</u> sp.	9	
<u>Antocha</u> sp.	3	
<u>Atherix variegata</u>	11	
<u>Dicranota</u> sp.	1	
Simuliidae	5	
Orthoclad #2	1	Total 30

NEMATODA 9 T

Nematoda	2	Total 2
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OLIGOCHAETA	7	Total 7
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COTTUS SP. 1 T

Original Total 679

Final Total 664

/s/ Patricia Ann Mitchell