

**Survey of Odonata in the Canadian Shield Natural Region of
Northeastern Alberta**

**II. 2001 Survey of La Butte Creek and Fidler-Greywillow
Wildland Parks**

prepared for the Alberta Natural Heritage Information Centre,
Parks and Protected Areas Division,
Alberta Community Development

by D. Macaulay
Alberta Lepidopterists' Guild

March 18, 2002



Figure 1. Collectors (Amanda Roe, Ted Johnson and Author) along La Butte Creek (13 km east of the mouth of La Butte Creek at Beaverdams location).

Table of Contents

Introduction.....	1
Materials and Methods.....	1
Results	2
Discussion.....	2
Summary and Conclusion	6
Acknowledgements	6
Literature Cited	7
Appendix 1. List of species found in La Butte Creek and Fidler-Greywillow Wildland Parks.	
Appendix 2. Complete data for specimens collected in La Butte Creek and Fidler-Greywillow Wildland Parks.	
Appendix 3. Photographic records of odonate species found in La Butte Creek and Fidler-Greywillow Wildland Parks.	
Appendix 4. Odonate images from La Butte Creek and Fidler-Greywillow Wildland Parks.	

INTRODUCTION

In Alberta, the Canadian Shield Ecoregion is restricted to the extreme northeast part of the province (Strong and Leggat 1992). It is subdivided into the Kazan Upland Subregion and the Athabasca Plain Subregion, located to the north and south of Lake Athabasca, respectively. There are several wildland parks that have recently been established in these two subregions.

An odonate survey was conducted in the summer of 2000 (Hornung) within three of the wildland parks that are located in the Athabasca Plain Subregion, namely Maybelle River, Marguerite River and Richardson River Dunes. This survey was the first for these three parks. Two parks located in the Kazan Upland Subregion were the focus for an odonate survey in the summer of 2001, namely La Butte Creek and Fidler-Greywillow Wildland Parks. The subregion within which these two wildland parks are located contains extensive riparian and shield outcrop habitats. The purpose of the survey in La Butte Creek and Fidler-Greywillow was to provide an annotated summary of the odonate species that occur in these parks, including notes on such parameters as relative abundance, distribution patterns, range extensions and any other relevant biological or behavioral information. The information obtained would contribute towards an increased understanding of the odonate fauna both within the two wildland parks but also within the broader context of Alberta.

METHODS AND MATERIALS

Two wildland parks were sampled during the odonate survey (Table 1). La Butte Creek Wildland Park was sampled from July 5 - 11 by the author, Greg Pohl, Amanda Roe, Ben Gaudet, Ted Johnson and Wayne Nordstrom. Fidler-Greywillow Wildland Park was sampled from July 17 - 25 by Dave Lawrie, Ben Gaudet, Ted Johnson, Wayne Nordstrom and Vanessa Block. Additionally, some odonate collecting was done in both parks from June 6 - 17 by Wayne Nordstrom and Rob Hughes.

The way in which odonate species were collected varied. Adult specimens were netted and larval exuvia were gathered by hand. Photographs were taken of some species. Specimens were collected from a variety of habitats, including sedge fens (SF), rock outcrops with jack pine (RO) and riparian aspen communities (RP) (Table 1).

Specimens were identified using various resources. Walker (1953), Walker and Corbet (1975), Acorn (1981), and Dunkle (2000) were the primary sources used for identification and biological information related to particular species. Voucher specimens have been deposited at the Northern Forestry Centre in Edmonton.

Table 1: Habitats and locations of collection sites.

Site No.	Habitat	Location	Coordinates
<i>La Butte Creek Wildland Park:</i>			
1	RO	Rock outcrop 500m NE of mouth of La Butte Ck.	59.42504°N 111.44036°W
2	RP	Beaverdams, 13km E of mouth of La Butte Ck.	59.36549°N 111.12988°W
4	RP	Base Camp, mouth of La Butte Ck. On Slave R.	59.42126°N 111.44612°W
5	SF	Sedge meadow 200m N of mouth of La Butte Ck.	59.42114°N 111.44531°W
<i>Fidler-Greywillow Wildland Park:</i>			
6	RP	Fidler Point, Lake Athabasca	59.107°N 110.426°W
7	RP	Bustard Island, Lake Athabasca	58.80° N 111.77° W

RESULTS

A total of 68 odonate specimens, belonging to 6 families and 22 species, were collected in the two wildland parks. Of the 22 species, six were from the Suborder Zygoptera (damselflies) and 16 from the Suborder Anisoptera (dragonflies) (Appendix I). A species list and collection summary appears in Appendix 1; full collection data appears in Appendix 2. Photographic records are detailed in Appendix 3 and Appendix 4 presents some of those photographs.

Many more specimens and species were collected in La Butte Creek than in Fidler-Greywillow Wildland Park (Table 2). A large proportion ($13/19 = 68.4\%$) of species collected in La Butte Creek were not collected at Fidler-Greywillow, while only ($3/9 = 33.3\%$) of species collected in Fidler-Greywillow were not collected at La Butte Creek.

Table 2. Species Abundance within La Butte Creek and Fidler-Greywillow Wildland Parks.

<i>Wildland Park</i>	<i># of Specimens</i>	<i># of Species</i>	<i># Unique</i>
La Butte Creek	54	19	13
Fidler-Greywillow	14	9	3

DISCUSSION

I. Study Limitations

Most odonate species are active all summer either as adults or naiads (Dunkle 2000). Therefore a complete survey of adults, naiads and their exuviae would require regular collecting (approximately every month) throughout the entire season, from the beginning of April to the end of September. As well, species are often localized in particular microhabitats, some of which were not accessible on this survey. Despite these limitations, there were a number of specimens and species collected during the survey.

II. Comparison of catches from the two parks

Many more specimens and species were collected in La Butte Creek than in Fidler-Greywillow Wildland Park (Table 2). This was likely due to a combination of weather and sampling differences, as well as real habitat differences. At Fidler-Greywillow, inclement weather made some sites inaccessible, and resulted in low catches at sites that were accessible. However, at La Butte Creek, the collectors experienced calm, warm weather, resulting in large catches.

Because it was impossible to thoroughly sample all habitats, collection efforts were concentrated on unique and accessible ones. At Fidler-Greywillow, collection efforts were concentrated on the unique shoreline and backshore habitats of the area while at La Butte Creek specimens were collected from riparian areas, rocky outcrops, sedge meadows and forests. A greater sampling effort in habitats other than lakeshore or near lakeshore at Fidler-Greywillow would likely add to the species complement for this park since its lakeshore habitats probably harbour fewer species than its forest, interior wetland and other habitats.

III. Distribution patterns and taxa

The following is an annotated list of the species that were collected in the two wildland parks. For each species, notes are included for any significant range extensions, the collection location, relative abundance and any other relevant biological or behavioral information. The list is arranged according to the two Suborders --Zygoptera and Anisoptera.

Suborder Zygoptera (Damselflies)

Family Calopterygidae

- *Calopteryx aequabilis* (Figure 2 and 3) – An uncommon species and a rare find in Alberta. It has been collected at Fort McMurray, Chinchaga River to the west of High Level, Maybelle River Wildland Park and now at La Butte Creek Wildland Park. The La Butte Creek population is the most northern population in Alberta and possibly Canada. At this location it prefers slower forest streams in the boreal forest and adults can be observed perched on semi-aquatic vegetation along the river (personal observation by author).



Figure 2. male *Calopteryx aequabilis* perched on vegetation at mouth of La Butte Creek.



Figure 3. female *Calopteryx aequabilis* perched on vegetation at mouth of La Butte Creek.

Family Coenagrionidae (range information is based on Walker (1953))

- *Nehalennia irene* (Figure 4) - a common species found in localized populations. In La Butte Creek Wildland Park specimens were collected at the east end of park among semi-aquatic sedges located along the shoreline of the creek.



Figure 4. male *Nehalennia irene* perched on a sedge at Beaverdams, 13 km east of the mouth of La Butte Creek.

- *Coenagrion resolutum* – A common species, collected in La Butte Creek Wildland Park. It is not a range extension. It is found across Canada including records from Fort Chipewyan, Alberta and the Great Slave Lake region of the Northwest Territories.
- *Enallagma boreale* - A common species, collected in La Butte Creek Wildland Park. It is found throughout boreal regions of Canada.
- *Enallagma ebrium* - A common species, collected in La Butte Creek Wildland Park. It is found throughout boreal regions of Canada.

Family Lestidae (range information is based on Walker (1953))

- *Lestes disjunctus* - A common species throughout La Butte Creek Wildland Park. Based on range information from Walker (1953) it is not a range extension since the species has been found throughout boreal regions in Canada.

Suborder Anisoptera (Dragonflies)

Family Aeshnidae (range and biological information from Dunkle (2000), Walker (1953) and Cannings (1996))

- *Aeshna canadensis* - A common species, collected in La Butte Creek Wildland Park. Found in southern Canada and the northern United States.
- *Aeshna eremita* - A common species, collected in La Butte Creek Wildland Park and photographed at Fidler-Greywillow Wildland Park. Species is found across Canada.

- *Aeshna interrupta* - A common species, collected in La Butte Creek Wildland Park. Species is found across Canada.
- *Aeshna juncea* - A common species, collected in both La Butte Creek and Fidler-Greywillow Wildland Parks. Species is found across Canada and is considered one of Canada's most widespread boreal inhabitants.

Family Corduliidae (range and biological information from Dunkle (2000), and Walker and Corbet (1975))

- *Cordulia shurtleffii* - A common species, collected in both parks. It is not a range extension having been found in Fort Chipewyan, Alberta and the Great Slave Lake region, Northwest Territories.
- *Epitheca spinigera* - A common species, collected on Bustard Island in Fidler-Greywillow Wildland Park. The collected specimen represents a northern range extension for Alberta since it was only known previously from Edmonton, Marguerite River Wildland Park and Maybelle River Wildland Park.
- *Somatochlora* prob. *cingulata* - An uncommon species that occurs in lake habitats of the northern boreal forests. It was found at Fidler-Greywillow Wildland Park. The specimen that was collected was in numerous pieces and identification is uncertain.
- *Somatochlora hudsonica* - A common species that inhabits slow streams in the boreal forests. It was photographed in June at La Butte Creek Wildland Park.

Family Libellulidae (range and biological information from Dunkle (2000), and Walker and Corbet (1975))

- *Libellula quadrimaculata* - A common species that inhabits the boreal forest. It has been found at Ft. Smith, Red Deer and now at La Butte Creek and Fidler-Greywillow Wildland Parks.
- *Leucorrhinia borealis* - A common species that is found throughout central Alberta and northwards. It was collected in both parks and exists as far north as Great Slave Lake, NWT.
- *Leucorrhinia hudsonica* - A common species that inhabits the boreal forest. It was found in both parks and exists throughout the western part of the Northwest Territories.
- *Leucorrhinia glacialis* - An uncommon species. One specimen was collected in La Butte Creek Wildland Park. This specimen plus the specimens that were collected in 2000 from Maybelle River and Marguerite River Wildland Parks represent the most northern populations in Alberta.
- *Leucorrhinia proxima* - A common species that inhabits marshes of the boreal forest and is found throughout central Alberta and southern Northwest Territories. One specimen was collected in La Butte Creek Wildland Park.
- *Sympetrum danae* - A common species, collected in Fidler-Greywillow Wildland Park. The species is found throughout the boreal forest.
- *Sympetrum internum* - A common species that is found throughout central Alberta and northwards to the southern Northwest Territories. It was collected in La Butte Creek Wildland Park.
- *Sympetrum obtrusum* - A common species that is found throughout central Alberta and northwards to the southern Northwest Territories. It was collected in La Butte Creek Wildland Park.

SUMMARY AND CONCLUSIONS

During the odonate survey conducted in the summer of 2001 a total of 22 odonate species were collected, 16 from the Suborder Anisoptera and six from the Suborder Zygoptera. Though most species collected are common across Canada, three of the species (*Calopteryx aequabilis*, *Leucorrhinia glacialis* and *Somatochlora* prob. *cingulata*) are uncommon in Alberta. *C. aequabilis* is an uncommon species that inhabits the boreal forest and the other two are range extensions from central Alberta. With further sampling several more riparian, boreal and wetland specialists will likely be found.

ACKNOWLEDGEMENTS

This report would not have been possible without the assistance of members of the Alberta Lepidopterists' Guild, particularly Dave Lawrie, Greg Pohl and Amanda Roe, who collected along with the author. As well, Wayne Nordstrom and Rob Hughes collected specimens during their June visit to Fidler-Greywillow and La Butte Creek Wildland Parks. John Acorn confirmed identifications for the various specimens and the photographic records. Greg Pohl provided some of the odonate photographs. Thanks are also due to Vanessa Block, Ben Gaudet, and Ted Johnson for their efforts in collecting specimens.

The opportunity to inventory the odonates was made possible through an invitation from Wayne Nordstrom of the Parks and Protected Areas Division (Alberta Natural Heritage Information Centre unit) to the members of the Alberta Lepidopterists' Guild. In addition, park's staff of the Lac La Biche District made this project feasible by providing logistic support, including transportation, field camps and food. Without the efforts of Ted Johnson, Jennifer Gammon and the rest of the park's staff along with the field camp crew, this project would not have been possible.

LITERATURE CITED

- Acorn, H.H. 1981. Key to the Odonata of Alberta. Unpubl.
- Cannings, R. 1996. The Blue Darners, Dragonflies of the genus *Aeshna* in British Columbia. *Cordillera* 3(1): 28-38.
- Cannings, R.A. and Stuart, K.M. 1977. Dragonflies of British Columbia. B.C, Provincial Museum Handbook 35, Victoria 254pp.
- Dunkle, S.W. 2000. Dragonflies through Binoculars. Oxford University Press, New York. 266pp.
- Hornung, J.H. 2000. Species Inventory of the Order Odonata (Dragonflies and Damselflies) for the Shield Inventory Project. Unpubl. Report, Alberta Natural Heritage Information Centre, Parks and Protected Areas Division, Alberta Natural Resource Service, Edmonton, AB.
- Strong, W. and K.R. Leggat 1992. Ecoregions of Alberta. Alberta Forestry, Lands, and Wildlife, Edmonton, AB. 59pp.
- Walker, E.M. 1953. The Odonata of Canada and Alaska. V. 1. University of Toronto Press, Toronto. 292 pp.
- Walker, E.M. 1953. The Odonata of Canada and Alaska. V. 2. University of Toronto Press, Toronto. 318 pp.
- Walker E.M. and Corbet P.S. 1975. The Odonata of Canada and Alaska. V. 3. University of Toronto Press, Toronto. 307 pp.

Appendix 1: List of species found in La Butte Creek and Fidler-Greywillow Wildland Parks.

No.	Family	Species	La Butte Creek sites					Fidler-Greywillow sites			
			1	2	3	4	5	Combined	6	7	Combined
Suborder Anisoptera (dragonflies)											
4	AESHNIDAE	<i>Aeshna canadensis</i> Walker		2					x		
2	AESHNIDAE	<i>Aeshna eremita</i> Scudder		1		3			x	1	x
3	AESHNIDAE	<i>Aeshna interrupta</i> Walker				1			x		
1	AESHNIDAE	<i>Aeshna juncea</i> (Linnaeus)					1		x	1	x
10	CORDULIIDAE	<i>Cordulia shurtleffii</i> Scudder				1			x		3
11	CORDULIIDAE	<i>Epithea spinigera</i> Selys									1
12	CORDULIIDAE	<i>Somatochlora</i> prob. <i>cingulata</i> (Selys)									1
13	CORDULIIDAE	<i>Somatochlora hudsonica</i> (Selys) *				1			x		
16	LIBELLULIDAE	<i>Leucorrhinia borealis</i> Hagen				3			x		1
18	LIBELLULIDAE	<i>Leucorrhinia glacialis</i> Hagen	1						x		
17	LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)		4					x	3	2
22	LIBELLULIDAE	<i>Leucorrhinia proxima</i> Calvert				1			x		
15	LIBELLULIDAE	<i>Libellula quadrimaculata</i> Linnaeus				3			x	1	x
19	LIBELLULIDAE	<i>Sympetrum danae</i> (Sulzer)								1	x
20	LIBELLULIDAE	<i>Sympetrum internum</i> Montgomery	1			1			x		
21	LIBELLULIDAE	<i>Sympetrum obtrusum</i> (Hagen)				2			x		
Suborder Zygoptera (damselflies)											
5	CALOPTERYGIDAE	<i>Calopteryx aequabilis</i> Say		2		2			x		
7	COENAGRIONIDAE	<i>Coenagrion resolutum</i> (Hagen)		4		1			x		
8	COENAGRIONIDAE	<i>Enallagma</i> prob. <i>boreale</i> Selys		1		2			x		
9	COENAGRIONIDAE	<i>Enallagma ebrium</i> (Hagen)		4					x		
6	COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)		6					x		
14	LESTIDAE	<i>Lestes disjunctus</i> Selys		2		6			x		
SUB-TOTAL			2	26	0	27	1			7	8
TOTAL			55							15	

* No specimen, identified from photograph. The yellow-highlighted boxes also indicate photographic records only (see Appendix 3).

Appendix 2: Complete data for specimens collected in La Butte Creek and Fidler-Greywillow Wildland Parks.

Family	Species	Date	Locality	Lat / long	Coll.	Sex	Stage
Suborder Anisoptera (dragonflies)							
AESHNIDAE	<i>Aeshna canadensis</i> Wlk.	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	?	Adult
AESHNIDAE	<i>Aeshna canadensis</i> Wlk.	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
AESHNIDAE	<i>Aeshsna eremita</i> Scudder	July 12, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	W. Nordstrom	?	Nymph
AESHNIDAE	<i>Aeshsna eremita</i> Scudder	July 12, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	W. Nordstrom	?	Nymph
AESHNIDAE	<i>Aeshsna eremita</i> Scudder	July 7, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	W. Nordstrom	?	Nymph
AESHNIDAE	<i>Aeshsna eremita</i> Scudder	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	F	Adult
AESHNIDAE	<i>Aeshsna interrupta</i> Wlk.	July 7, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	D. Macaulay	F	Adult
AESHNIDAE	<i>Aeshsna juncea</i> L.	July 20, 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	W. Nordstrom	M	Adult
AESHNIDAE	<i>Aeshsna juncea</i> L.	July 9, 2001	Sedge Meadow 200m N of mouth of La Butte Ck.	59.42114N 111.44531W	D. Macaulay	F	Adult
CORDULIIDAE	<i>Cordulia shurtleffii</i> Scudder	July 12, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	T. Johnson	M	Adult
CORDULIIDAE	<i>Cordulia shurtleffii</i> Scudder	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	F	Adult
CORDULIIDAE	<i>Cordulia shurtleffii</i> Scudder	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	M	Adult
CORDULIIDAE	<i>Cordulia shurtleffii</i> Scudder	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	F	Adult
CORDULIIDAE	<i>Epitheca spinigera</i> (Selys.)	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	F	Adult
CORDULIIDAE	<i>Somatochlora</i> prob. <i>cingulata</i>	June 11, 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	Hughes\Nordstrom	?	Adult
LIBELLULIDAE	<i>Leucorrhinia borealis</i> Hagen	June 16, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	F	Adult
LIBELLULIDAE	<i>Leucorrhinia borealis</i> Hagen	June 14, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	F	Adult
LIBELLULIDAE	<i>Leucorrhinia borealis</i> Hagen	June 16, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	?	Adult
LIBELLULIDAE	<i>Leucorrhinia borealis</i> Hagen	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	F	Adult
LIBELLULIDAE	<i>Leucorrhinia glacialis</i> Hage	July 7, 2001	Rocks outcrop, 500m NE mouth of La Butte Ck.	59.42504N 111.44036W	GR Pohl	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	Macaulay, Pohl & Roe	F	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	June 7, 2001	Bustard Island	58.80N 111.77W	Hughes\Nordstrom	F	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 19, 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	W. Nordstrom	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 19, 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	W. Nordstrom	M	Adult
LIBELLULIDAE	<i>Leucorrhinia hudsonica</i> (Selys)	July 19, 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	W. Nordstrom	F	Adult
LIBELLULIDAE	<i>Leucorrhinia proxima</i> Calvert	June 16, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Macaulay, Pohl & Roe	F	Adult
LIBELLULIDAE	<i>Libellula quadrimaculata</i> L.	June 14, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	M	Adult
LIBELLULIDAE	<i>Libellula quadrimaculata</i> L.	July 7, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Macaulay, Pohl & Roe	M	Adult
LIBELLULIDAE	<i>Libellula quadrimaculata</i> L.	July 6, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Macaulay, Pohl & Roe	M	Adult
LIBELLULIDAE	<i>Libellula quadrimaculata</i> L.	July 19, 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	W. Nordstrom	M	Adult
LIBELLULIDAE	<i>Sympetrum danae</i> Sulzer	July 20 2001	Fidler Point, Lake Athabasca	59.107N 110.426W	D. Lawrie	F	Adult
LIBELLULIDAE	<i>Sympetrum internum</i> Mont.	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
LIBELLULIDAE	<i>Sympetrum internum</i> Mont.	July 6, 2001	Rocks outcrop, 500m NE mouth of La Butte Ck.	59.42504N 111.44036W	GR Pohl	M	Adult
LIBELLULIDAE	<i>Sympetrum obtrusum</i> Hagen	July 12, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Macaulay, Pohl & Roe	M	Adult
LIBELLULIDAE	<i>Sympetrum obtrusum</i> Hagen	July 12, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Macaulay, Pohl & Roe	F	Adult

Family	Species	Date	Locality	Lat / long	Coll.	Sex	Stage
Suborder Zygoptera (damselflies)							
CALOPTERYGIDAE	<i>Calopteryx aequabilis</i> Say	July 7, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	D. Macaulay	M	Adult
CALOPTERYGIDAE	<i>Calopteryx aequabilis</i> Say	July 10, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	D. Macaulay	F	Adult
CALOPTERYGIDAE	<i>Calopteryx aequabilis</i> Say	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
CALOPTERYGIDAE	<i>Calopteryx aequabilis</i> Say	July 12, 2002	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	W. Nordstrom	F	Adult
COENAGRIONIDAE	<i>Coenagrion resolutum</i> (Hagen)	June 14, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	F	Adult
COENAGRIONIDAE	<i>Coenagrion resolutum</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Coenagrion resolutum</i> (Hagen)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
COENAGRIONIDAE	<i>Coenagrion resolutum</i> (Hagen)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	F	Adult
COENAGRIONIDAE	<i>Coenagrion resolutum</i> (Hagen)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	F	Adult
COENAGRIONIDAE	<i>Enallagma ebrium</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Enallagma ebrium</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Enallagma ebrium</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Enallagma ebrium</i> (Hagen)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
COENAGRIONIDAE	<i>Enallagma prob. boreale</i> Selys.	June 14, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	M	Adult
COENAGRIONIDAE	<i>Enallagma prob. boreale</i> Selys.	June 14, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	Hughes\Nordstrom	M	Adult
COENAGRIONIDAE	<i>Enallagma prob. boreale</i> Selys.	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	F	Adult
COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)	July 7, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	F	Adult
COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)	July 10, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	D. Macaulay	M	Adult
COENAGRIONIDAE	<i>Nehalennia irene</i> (Hagen)	July 12, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	M	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	B. Gaudet	M	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2002	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	B. Gaudet	F	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2003	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	B. Gaudet	F	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2004	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	B. Gaudet	M	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2005	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	B. Gaudet	M	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2001	Base Camp, mouth of La Butte at Slave Riv.	59.42126N 111.44612W	B. Gaudet	M	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	F	Adult
LESTIDAE	<i>Lestes disjunctus</i> Selys.	July 15, 2001	Beaverdams, 13km E mouth of La Butte Ck.	59.36549N 111.12988W	T. Johnson	F	Adult

Appendix 3. Photographic records of odonate species found in La Butte Creek and Fidler-Greywillow Wildland Parks.

PHOTO #	FAMILY	SPECIES	COMMON NAME (after NatureServe)	PHOTOGRAPHER	LOCATION PHOTOGRAPHED	DATE	COMMENTS
Suborder Anisoptera (dragonflies)							
Drajs_08	AESHNIDAE	Aeshna eremita	lake darner	D. Vujnovic	La Butte Wildland Park	July 9, 2001	very common
Drajs_09	AESHNIDAE	Aeshna eremita	lake darner	D. Vujnovic	La Butte Wildland Park	July 9, 2001	very common; image is a female
Drajs_10	AESHNIDAE	Aeshna eremita	lake darner	D. Vujnovic	Shelter Point (Lake Athabasca)	July 24, 2001	not in the wildland park
Drajs_12	AESHNIDAE	Aeshna eremita	lake darner	D. Vujnovic	Shelter Point (Lake Athabasca)	July 24, 2001	very common; not in the wildland park
Lorna_01	AESHNIDAE	Aeshna eremita	lake darner	L. Allen	Fidler-Greywillow Wildland Park	July 18, 2001	very common
Lorna_02	AESHNIDAE	Aeshna eremita	lake darner	L. Allen	Fidler-Greywillow Wildland Park	July 18, 2001	very common
Drajs_03	CORDULIIDAE	Cordulia shurtleffi	American emerald	D. Vujnovic	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Drajs_04	CORDULIIDAE	Cordulia shurtleffi	American emerald	D. Vujnovic	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Drajs_05	CORDULIIDAE	Cordulia shurtleffi	American emerald	D. Vujnovic	Fidler-Greywillow Wildland Park	June 10, 2001	very common
Wayne_14	CORDULIIDAE	Cordulia shurtleffi	American emerald	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Wayne_16	CORDULIIDAE	Cordulia shurtleffi	American emerald	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Wayne_17	CORDULIIDAE	Cordulia shurtleffi	American emerald	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Wayne_18	CORDULIIDAE	Cordulia shurtleffi	American emerald	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Wayne_19	CORDULIIDAE	Cordulia shurtleffi	American emerald	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Drajs_06	CORDULIIDAE	Cordulia shurtleffi_roost	American emerald	D. Vujnovic	Fidler-Greywillow Wildland Park	June 10, 2001	very common
Drajs_07	CORDULIIDAE	Cordulia shurtleffi_roost	American emerald	D. Vujnovic	Fidler-Greywillow Wildland Park	June 10, 2001	very common
Wayne_15	CORDULIIDAE	Cordulia shurtleffi_roost	American emerald	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	very common
Wayne_06	CORDULIIDAE	Somatochlora hudsonica	Hudsonian emerald	W. Nordstrom	La Butte Wildland Park	June 14, 2001	ID not entirely certain
Wayne_07	CORDULIIDAE	Somatochlora hudsonica	Hudsonian emerald	W. Nordstrom	La Butte Wildland Park	June 14, 2001	ID not entirely certain
Wayne_08	CORDULIIDAE	Somatochlora hudsonica	Hudsonian emerald	W. Nordstrom	La Butte Wildland Park	June 14, 2001	ID not entirely certain
Wayne_09	CORDULIIDAE	Somatochlora hudsonica	Hudsonian emerald	W. Nordstrom	La Butte Wildland Park	June 14, 2001	ID not entirely certain
Drajs_01	LIBELLULIDAE	Leucorrhinia borealis	boreal whiteface	D. Vujnovic	Fidler-Greywillow Wildland Park	June 11, 2001	common
Drajs_02	LIBELLULIDAE	Leucorrhinia borealis	boreal whiteface	D. Vujnovic	Fidler-Greywillow Wildland Park	June 11, 2001	common
Wayne_01	LIBELLULIDAE	Leucorrhinia borealis	boreal whiteface	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	common; image is a female
Wayne_05	LIBELLULIDAE	Leucorrhinia borealis	boreal whiteface	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	common
Wayne_20	LIBELLULIDAE	Leucorrhinia borealis	boreal whiteface	W. Nordstrom	Fidler-Greywillow Wildland Park	June 11, 2001	common; image is a female
Wayne_02	LIBELLULIDAE	Libellula quadrimaculata	four-spotted skimmer	W. Nordstrom	Bustard Island (Lake Athabasca)	June 7, 2001	very common
Wayne_03	LIBELLULIDAE	Libellula quadrimaculata	four-spotted skimmer	W. Nordstrom	Bustard Island (Lake Athabasca)	June 7, 2001	very common
Wayne_04	LIBELLULIDAE	Libellula quadrimaculata	four-spotted skimmer	W. Nordstrom	Bustard Island (Lake Athabasca)	June 7, 2001	very common
Suborder Zygoptera (damselflies)							
Wayne_12	CALOPTERYGIDAE	Calopteryx aequabilis	river jewelwing	W. Nordstrom	La Butte Wildland Park	July 12, 2001	uncommon
Wayne_13	CALOPTERYGIDAE	Calopteryx aequabilis	river jewelwing	W. Nordstrom	La Butte Wildland Park	July 12, 2001	uncommon

Appendix 4. Odonate images from La Butte Creek and Fidler-Greywillow Wildland Parks



Photo: D. Vujnovic

Leucorrhinia borealis at Fidler-Greywillow WP.



Photo: D. Vujnovic

Cordulia shurtleffi at Fidler-Greywillow WP.



Photo: L. Allen

Aeshna eremita at Fidler-Greywillow WP.



Photo: W. Nordstrom

Leucorrhinia borealis at Fidler-Greywillow WP.



Photo: W. Nordstrom

Libellula quadrimaculata on Bustard Island.



Photo: W. Nordstrom

Somatochlora hudsonica at La Butte Creek WP.



Photo: W. Nordstrom

Somatochlora hudsonica at La Butte Creek WP.



Photo: W. Nordstrom

Teneral at La Butte Creek WP.



Photo: W. Nordstrom

Calopteryx aequabilis at La Butte Creek WP.



Photo: W. Nordstrom

Cordulia shurtleffi at Fidler-Greywillow WP.



Photo: W. Nordstrom

Cordulia shurtleffi at Fidler-Greywillow WP.



Photo: W. Nordstrom

Cordulia shurtleffi at Fidler-Greywillow WP.