

EIGHT NEW OR PREVIOUSLY UNRECORDED SPECIES OF ODONATA (DRAGONFLIES) FOR SASKATCHEWAN

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Since 1998, I have been spending part of each summer surveying the dragonfly fauna of Saskatchewan. Dragonflies are a relatively small order of insects consisting of approximately 5000 species worldwide.^{2,8,9} Five years ago, the checklist of Saskatchewan dragonflies numbered 62 recognized species.⁷ Eight species have been added to the list, some expected, some not, and here I present the collection locations and dates, as well as some comments on distribution for each. Common names are from a checklist of North American Odonata.⁶

The eight new species are *Aeshna subarctica* - Subarctic Darner, *Aeshna tuberculifera* - Black-Tipped Darner, *Basiaeschna janata* - Springtime Darner, *Stylurus notatus* - Elusive Clubtail, *Somatochlora walshii* - Brush-Tipped Emerald, *Somatochlora williamsoni* - Williamson's Emerald, *Leucorrhinia patricia* - Canada Whiteface, and *Sympetrum semicinctorum* - Band-Winged Meadowhawk. Two of the species that were collected in 2001 and 2002—*Aeshna subarctica*, and *Leucorrhinia patricia*—were previously documented, but the records were not known to the general odonatological community. Information on *Stylurus notatus*, a species known only from a previous collection, is included here as well.

All specimens referred to were collected by myself except where otherwise noted.

The specimens are currently housed at the Royal Saskatchewan Museum with duplicates of the 2001-2003 collections in my personal reference collection in Victoria, B.C.

It should be borne in mind that a species list is always a work in progress, setting a benchmark for more comparisons with future collecting, especially in hard-to-reach regions of the province. The list will surely change as more people become involved in dragonfly collecting and observations.

Aeshna tuberculifera Walker - Black-Tipped Darner (Fig. 1)

Aeshna tuberculifera was first recorded in Saskatchewan, August 3-12, 2002, in the Cantara Lake area of Athabasca Sand Dunes Provincial Wilderness Park (ASDPWP), where it was flying in large numbers and, at times, was the third most common dragonfly on the wing.⁵ On August 24, 2003, two males that were patrolling over a small sedge pond in the Canwood Forest area north of Shellbrook, were collected.

This species was not suspected of occurring in the prairie provinces as the previous records are from south-central British Columbia and extreme southeastern Manitoba (Fig. 2).^{1,2,3} This uncommon dragonfly of peat-margined waters is most likely to be found more extensively over time. Nick Donnelly, past president and



Figure 1. Aeshna tuberculifera in the hand

G.E. Hutchings

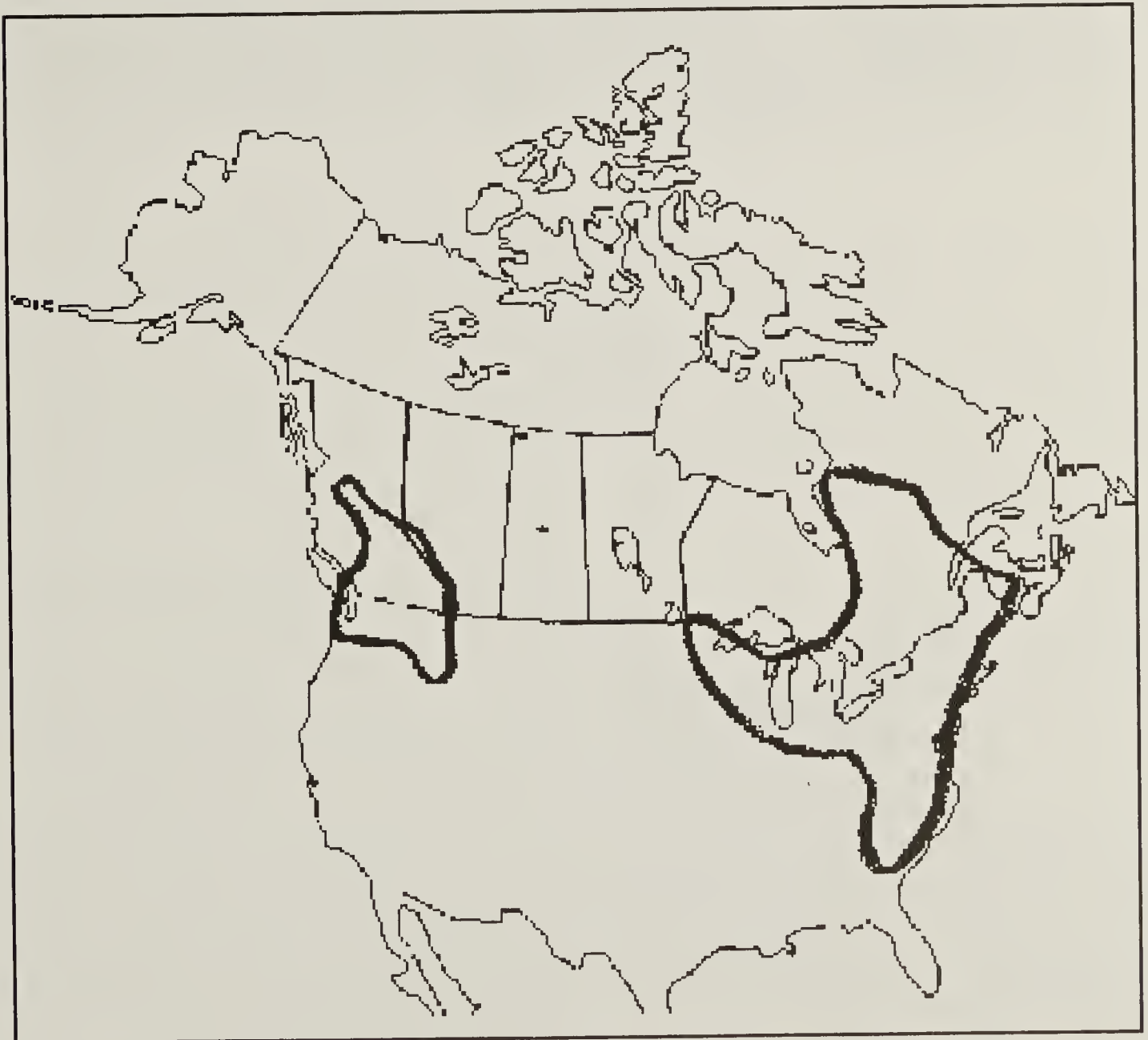


Figure 2. Areas within thick dark lines are the former reported range for Aeshna tuberculifera in North America and the two rectangles in Saskatchewan are new collecting sites in Saskatchewan



Figure 3. A perching male *Basiaeschna janata*

S.W. Dunkle

distinguished member of the Dragonfly Society of the Americas, says of this discovery: “*Aeshna tuberculifera* is a good example of a species that looks like it has an eastern and a western population - simply because of few data in the middle. I think that it is continuous across the country, but very undersampled.”(Nick Donnelly, pers. comm.).

***Basiaeschna janata* (Say) - Springtime Darner (Fig. 3)**

On 30 June, 2001, while working on an insect survey of Prince Albert National Park (PANP), I collected a hawking male *B. janata*, feeding amongst several other dragonflies at a rich fen bordering a pond in the middle of the park, on the west side of Waskesiu Lake.⁴ Two days later, a female was collected from Waskesiu River which flows out of the east side of Waskesiu Lake.

This new record in Saskatchewan is a range extension north and west of some 800 km as the “dragonfly flies” (Fig. 4). These two sites

were directly across Waskesiu Lake from each other at 53° 57' N, 106° 14' W, about 1° north and 8° west of previous records near the extreme southern border of Manitoba and Ontario. The nearest known site for this species is from east of the town of Lac du Bonnet, Manitoba, on June 5, 1982 (Dennis Paulson, pers. comm.).

Another *B. janata* was collected on June 19, 2002 at Candle Lake 53° 46' N, 105° 15' W. (Dale Parker, pers. comm.).

***Somatochlora walshii* (Scudder) - Brush-Tipped Emerald**

A female was collected on July 2, 2001 in a large fen complex just west of the limits of PANP near Listen Lake (54°18' N, 106° 51' W).⁴ Although this species is known from both neighbouring Alberta and Manitoba, only one female was found here. This record fills in a large distribution gap, but more specimens should be encountered in the future.

***Somatochlora williamsoni* Walker - Williamson's Emerald** (see back cover)

This species was collected on July 7, 2001 at Buckland Bog, 4 km west of Prince Albert (53° 11' N, 105° 56' W) and again on July 14, 2001 at Kingsmere Lake PANP (54° 02' N, 106° 25' W). A healthy population of *S. williamsoni*, with many actively patrolling males, ovipositing females and copulating pairs, was observed seeking refuge from the wind on an open edge of this lake. Back in PANP on August 9, 2001, a lone, hawking male *S. williamsoni* was collected at Kingsmere Lake at 54° 02' N, 106° 25' W.

On August 21, 2002, this species seemed to be doing well at the Buckland Bog site where many individuals were frequenting this same spot. Also on August 21 at Boundary Bog in PANP, 53° 54' N, 106° 02' W, many males were patrolling over the open water of the small lake, and there were a few

ovipositing females. Previous visits to this site in PANP since 1997 never produced this species so it appears to be extending its range northward. This dragonfly species was previously known only as far west as the Manitoba/Ontario border country, with very limited distribution as far west as Winnipeg Beach and Gull Lake, Manitoba (Fig. 4).³

***Sympetrum semicinctorum* Walker - Band-Winged Meadowhawk**

A mating pair was captured on August 9, 2003 from the forested edge of the fen complex at MacDowell Bog, south of Prince Albert at 52°58' N, 106° 05' W. This species, which is sometimes referred to as two distinct species, *S. occidentale* and *S. semicinctorum*, is known to occur in adjacent southern Alberta and northern North Dakota. Its range stretches east and west, coast to coast. It was expected from southern Saskatchewan and this record fills in a distribution gap.

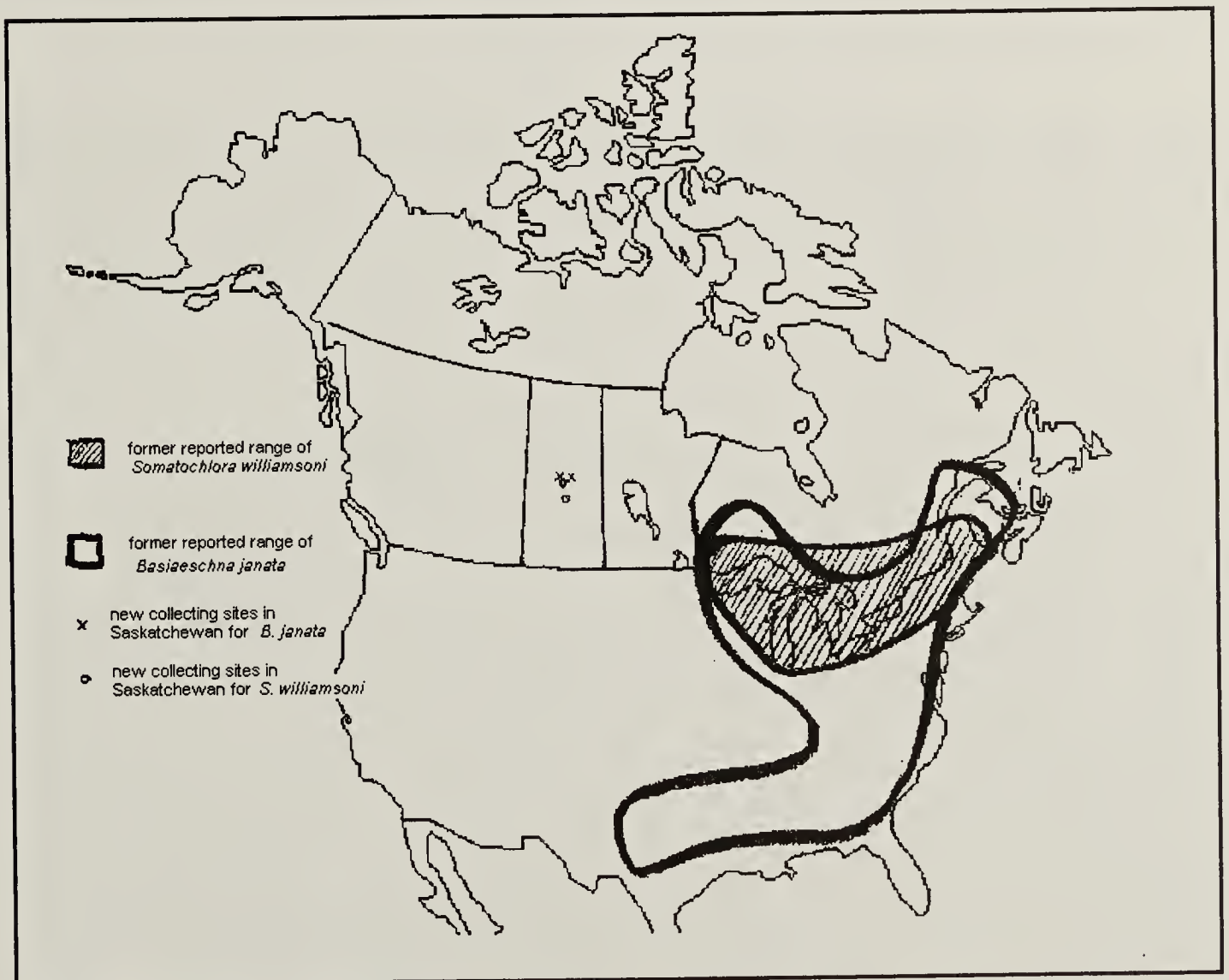


Figure 4 Former reported range for *Basiaeschna janata*, and *S. williamsoni* in North America and new collecting sites in Saskatchewan

***Aeshna subarctica* Walker- Subarctic Darner (Fig. 5)**

This species was first collected by Ron Hooper on July 13, 1964 at Black Lake. It was again collected from Upper Fishing Lake in Narrow Hills Provincial Park on August 4, 1975 by Wayne Harris (Ron Hooper pers. comm.). In 2001, I collected it at four locations: Buckland Bog, 4 km west of Prince Albert at 53° 11' N, 105° 56' W on August 19; a fen in the Canwood Forest, 5 km north of Shellbrook at 53° 19' N, 106° 31' 16 W on August 21; Boundary Bog in PANP, 53° 54' N, 106° 02' W on August 23; and a series of small fens on the west side of Waskesiu Lake at 53° 57' N, 106° 14' W on August 24.

In 2002, several specimens were collected from ponds and fens around Cantara Lake in ASDPWP, 59° 06' N, 108° 57' W, between August 3 and 12. On August 9, 2003 a male was recorded from the open pools in MacDowell Bog south of Prince Albert at 52° 58' N, 106° 05' W. The Canwood Forest

site was revisited on August 24, 2003 where again this species was flying. It is known from every other province, the Yukon and North West Territories, and was definitely expected from this province. It appears that this species is widespread and a common occurrence especially in northern Saskatchewan, based on its known fen and bog habitat

***Stylurus notatus* (Rambur) - Elusive Clubtail**

Ron Hooper collected one adult male from the Frenchman Butte area, northeast of Lloydminster, on July 13, 1971 (Ron Hooper pers. comm.). This location near the North Saskatchewan River is a typical habitat for this species which prefers wide, slow-moving large rivers. Previously this species was known to extend only as far west as western Manitoba, so this record is a substantial range extension for North America.



Figure 5. *Aeshna subarctica* in the hand

G.E. Hutchings

Leucorrhinia patricia Walker - Canada Whiteface

This boreal species was first recorded in Saskatchewan from Charcoal Lake, just east of Wollaston Lake on July 24, 1964 by Ron Hooper. Additional specimens were collected from Patterson and Hasbala lakes in the extreme northeast corner of the province straddling the N.W.T. and Manitoba borders in 1973, 1975 and 1986, as well as from La Ronge in 1982, all by Ron Hooper (Ron Hooper pers. comm.).

Recently this species was found at a fen complex surrounding Cantara Lake of ASDPWP at 59° 07' N, 108° 55' W, from August 4 to 12, 2002. This species is found in sparse numbers in northern bogs right across Canada and this record for Saskatchewan fills in the distribution gap.

Acknowledgments

I thank Ron Hooper for his historical records for *Aeshna subarctica*, *Stylurus notatus* and *Leucorrhinia patricia* and his support in submitting this article to *Blue Jay*; Dennis Paulson, Dale Parker, J. Hamblin and Nick Donnelly for information on the distribution of *Basiaeschna janata* and *Aeshna tuberculifera*; Dr. Sid Dunkle for use of his photos of *B. janata* and *S. williamsoni*;

Peter Jonker for his comments on the draft and Rob Cannings for confirming the identification of the specimens.

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“In countries ranging from Peru to New Guinea, figs are a critical resource for a wide variety of animals in tropical forest communities – from bats and primates (including people) to parrots and birds of paradise. Up to 70 percent of vertebrate diets in certain forests is derived from figs. There are more than 750 different fig species in the world, and the majority of them rely on different species of tiny wasps as their exclusive pollinator.”

Stephen L. Buchmann and Gary Paul Nabhan, *The Forgotten Pollinators*, 1996. p. 58