

Evolution of a Dragonfly Survey

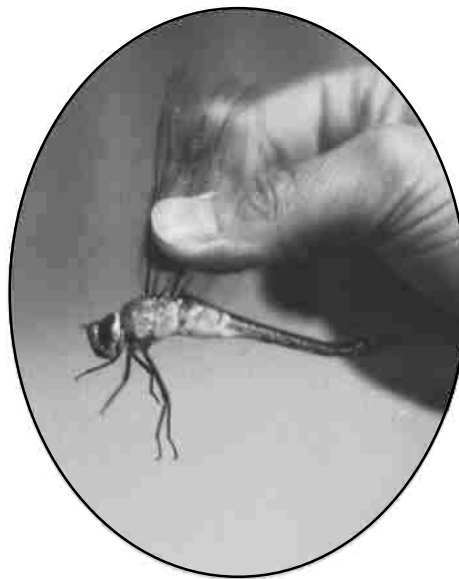
The Manitoba CDC is contemplating the introduction of a provincial dragonfly survey. Approximately 85 dragonfly species occur in the Prairies. Collectively referred to as odonates, 5,500 species of dragonflies exist worldwide.

"Until we determine the distribution of dragonfly species, we are unable to produce a conservation status ranking for Manitoba," said CDC zoologist Jim Duncan. To help narrow the information gap on this group of insects, Duncan acquired over 2,500 records on dragonflies and damselflies from John Conroy, a biology professor at the University of Winnipeg. Conroy's records have made a great addition to the CDC's growing database. For additional odonate information, Duncan has looked south to Minnesota where a successful dragonfly survey has been running since 1994 with the support of the general public.

According to Janet Rith, coordinator of the Minnesota Dragonfly Survey Project, the survey began with water quality analysis of the Mississippi River's headwaters in the northern part of the state. "People wanted to do more," Rith said. "We've got a lot of water in Minnesota and you can't get citizen monitors out to test water everywhere."

She knew many countries used dragonflies as indicators of water quality and Rith had also been involved in a dragonfly survey in Colorado. Using the same network of citizens involved in water sampling, the Minnesota dragonfly survey was established. Public interest in the survey has grown and training workshops to identify species are now held for interested citizens across the state.

(Continued page 2, "Dragonfly Survey")



Manitoba CDC zoologist, Jim Duncan, holds a green darner dragonfly (Anax junius), a common species in Manitoba.

Cooperative Agreement Benefits CDC

Parks Canada, Manitoba Natural Resources and the Manitoba Conservation Data Centre have entered into an agreement to create a new temporary position at the Manitoba CDC.

Debi Forlanski, a data manager with Parks Canada, has been assisting CDC information manager, François Blouin, since January of this year. Forlanski is updating the CDC's managed area database and developing a species at risk evaluation for Riding Mountain National Park and the surrounding area.

"Information currently available on the Riding Mountain region is being gathered," Forlanski said. "Then we are applying a GIS gap analysis to help us identify where species of concern may occur so we can best manage these species."

(Continued page 2, "CDC's Beneficial Agreement")

The Manitoba Conservation Data Centre was initiated by:

- Manitoba Museum of Man and Nature
- The Nature Conservancy of Canada
- Manitoba Natural Resources
- The Nature Conservancy (United States)

Manitoba
Natural Resources
Hon. J. Glen Cummings
Minister



Dragonfly Survey

Cont'd from front page

The Manitoba CDC would like to develop a similar comprehensive study of odonates in Manitoba. The information accumulated through the Minnesota dragonfly survey will greatly complement a survey undertaken in Manitoba. Species lists have already been exchanged. "If they've found it in adjacent Minnesota, it's probably here in Manitoba," Duncan said. "We'd really like to find out who else in Manitoba is interested in promoting this project."

Anyone interested in participating in a dragonfly survey, including technical and scientific experts as well as citizen scientists, should call Jim Duncan at (204) 945-7465. ■

CDC's Beneficial Agreement

Cont'd from front page

Forlanski has a strong technical background in GIS and will be a great asset to the CDC until the position concludes at the end of April.

"Debi's position with the CDC is setting a precedent for future work cooperatives involving all three parties," said Carol Scott, Manitoba CDC manager. "The CDC benefits because the information generated for Parks Canada by Debi will be available to the CDC and clients of the CDC, including Manitoba Natural Resources." ■

Boreal Forest Community Workshop

On November 30, 1998, CDC botanist/ecologist Jason Greenall held a workshop to review the Manitoba CDC's provisional status ranks of the province's boreal forest communities. Two previous workshops developed a CDC natural plant community classification and reviewed the ranks of the prairie and parkland communities. The November workshop resulted in changes to over half of the provisional boreal forest ranks, along with several suggested changes to the classification itself.

Four of the 23 boreal forest types reviewed were considered "very rare" or "rare" in Manitoba. Rare forest types were either dominated by tree species at the edge of their North American range, such as red pine, black ash and eastern white cedar, or represented very specific and quite uncommon habitats, such as trembling aspen swamps. Remaining forest communities, dominated by Manitoba's more common tree species, were considered to be "apparently secure" or "secure" by workshop participants.

The review also proposed three additions to the plant community classification and highlighted plant communities where existing information is minimal. Highly ranked and poorly understood communities are considered priorities for future information gathering.

Dr. Karen Johnson, curator of botany with the Manitoba Museum of Man and Nature, has studied Manitoba's plant communities for 30 years and attended the workshop. She said it was difficult for workshop members to concep-

tualize forest type occurrences, especially their size, distribution and composition.

"I've probably seen as much of the province as anyone," Johnson said, adding that the difficulty in classification lies in the fact that so much of the

province is relatively unexplored.

"There are large areas most of us have never been in." However, Johnson did say the CDC's workshop was a great step forward in quantifying existing maps of the province's plant communities that are very general in nature. The process also helps to identify areas that should be a priority for conservation by determining communities that are at risk of extirpation or are decreasing in number. "We are grateful that the CDC is taking the project on."

Another workshop is planned for spring 1999 to continue the peer review process for other boreal plant communities, as well as those found along the Hudson Bay coastline. ■



To date, the CDC has identified approximately 170 plant communities that occur in Manitoba. This listing is subject to change with each plant community workshop held.

■ CDC Project Updates

Updating Botanical Records

Each year, the CDC updates its records by investigating one or more rare plants. In 1999, the CDC's special projects botanist, Elizabeth Punter, will undertake a survey of silky or hairy prairie-clover (*Dalea villosa*) in southwestern Manitoba. Silky prairie-clover was recently listed as Threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) meaning that it is likely to become endangered if limiting factors are not reversed.

Silky prairie-clover can be found in mixed prairie communities in Manitoba and Saskatchewan. It prefers to grow in active sandhills or sandhill blowouts. Punter will start her search in the sandhills of southcentral and southwestern Manitoba.

The plant resembles the more common purple and white prairie-clover but its leaves and stems are hairy. Factors limiting the existence of silky prairie-clover include overgrazing by livestock, habitat disruption by recreational vehicles, cultivation, invasion by leafy spurge and fire suppression.

"As a result of fire suppression, woody vegetation is encroaching silky prairie-clover habitats," Punter said.

Punter's first step in investigating the plant will be to compile a profile by referencing herbarium specimens, literature, scientific papers, and reports from scientists and the public. A field survey of known localities will then be undertaken this summer to update the CDC's records and to widen the search to include other likely locations. Punter will collect information on the plant's population size, associated plants, habitat characteristics, land ownership and land use. She will also identify possible threats to the plant's habitat.

Silky prairie-clover was first recorded in Manitoba in 1863 by Dr. Bourgeau, a botanist with the Palliser expedition. He noted the plant's presence in sandhills near the Souris River.

Punter welcomes any reports from the public of rare plant species in the province. Call her at 945-8481 or E-mail her at epunter@nr.gov.mb.ca. ■



Silky prairie-clover (Dalea villosa) will be the focus of this year's botanical record update.

■ FOCUS ON . . . Source Abstract Database

The Source Abstract database is a bibliography of information sources, that includes books, published and unpublished reports, field surveys, journal articles, and personal communications from knowledgeable individuals. The ability to organize information on species and plant communities at risk, as well as on areas under special management makes this database especially valuable. It can be queried to generate bibliographies on certain subjects, geographic areas, or authors. An annual data exchange supplements the Manitoba CDC's Source Abstract database with new abstracts compiled by conservation data centres and similar natural heritage programs throughout Canada, the United States, and in various Latin American and Caribbean countries. This exchange benefits the Manitoba CDC as it provides new information sources from the entire range of a species or a plant community. ■

Significant Discovery

During a rare plant survey in 1997, Manitoba CDC staff unexpectedly came across Cooper's milkvetch (*Astragalus neglectus*) in the Tall Grass Prairie Preserve. The plant has large seed pods with red mottling on upright stems.

This was the first sighting of the plant in Manitoba in forty years. Subsequently, two additional locations with milkvetch have been found. Cooper's milkvetch is rare in Manitoba and Ontario. ■

■ Staff and Volunteer Updates

New volunteer Patricia Pohrebniuk is using the CDC as her first step in developing a career in conservation biology. Pohrebniuk recently graduated from the University of Manitoba's environmental science program. She has a strong background in botany and ecology and would like to take an active role in the conservation of species of concern.

She is currently entering location data on recorded sightings of the Baird's sparrow, a species listed as endangered in Manitoba. "Once you start plotting

these points on the CDC's GIS, you see a list of numbers transform into a meaningful map of the bird's distribution," Pohrebniuk said. "It's incredibly interesting!"

Prior to helping out at the CDC, Pohrebniuk worked for the forestry branch on their Dutch elm disease surveillance program. She contacted botanist/ecologist Jason Greenall regarding volunteer opportunities and was eager to lend a hand.

Welcome Patricia! ■

Volunteer opportunities exist for people with biological training and/or experience with GIS and computer databases.

New Publications

- Ringius, G.S. and R.A. Sims. 1998. Indicator plant species in Canadian forests. Natural Resources Canada, Canadian Forest Service, Ottawa, ON. 218 p.
- Scott, W.B. and E.J. Crossman. 1998. Freshwater Fishes of Canada. Revised Ed., Galt House Publications Ltd., Oakville, ON. 966 p.

Manitoba Conservation Data Centre

Manitoba Natural Resources ■ Wildlife Branch

Box 24 ■ 200 Saulteaux Crescent ■ Winnipeg, ■ Manitoba ■ Canada ■ R3J 3W3

Phone ■ (204) 945-7743

Fax ■ (204) 945-3077

E-mail ■ fblouin@nr.gov.mb.ca

Home page ■ <http://www.gov.mb.ca/natres/cdc>

STAFF

phone

Carol Scott.....Manager.....(204) 945-2911
cscott@nr.gov.mb.ca

Elizabeth Punter.....Special Projects Botanist.....(204) 945-8481
epunter@nr.gov.mb.ca

Jason Greenall.....Botanist/Ecologist.....(204) 945-2912
jgreenall@nr.gov.mb.ca

François Blouin.....Information Manager.....(204) 945-6998
fblouin@nr.gov.mb.ca

Dr. James Duncan.....Zoologist.....(204) 945-7465
jduncan@nr.gov.mb.ca

The following companies and organizations have contributed to the development of the Manitoba Conservation Data Centre:

- **Canadian Wildlife Service, Environment Canada**
- **Cargill Limited**
- **Centra Gas Manitoba Inc.**
- **De Fehr Foundation Inc.**
- **Dominion Tanners, A Division of United Canadian Shares Limited**
- **Ducks Unlimited Canada**
- **ENSIS Corporation Inc.**
- **Falconbridge Limited**
- **Gendis Inc. Sony of Canada Ltd.**
- **Gray Owl Fund**
- **Inco Limited, Manitoba Division**
- **James Richardson & Sons Ltd.**
- **Kleysen Transport Ltd.**
- **Linnet Geomatics International Inc.**
- **Louisiana-Pacific Canada Ltd.**
- **Manitoba Hydro**
- **Manitoba Naturalists Society**
- **Manitoba Peregrine Committee**
- **Manitoba Wildlife Rehabilitation Organization**
- **Nature Saskatchewan**
- **Northern Forest Owl Symposium Award Fund**
- **Shell Environment Fund**
- **The Nature Conservancy (Minnesota Chapter)**
- **The Wawanesa Mutual Insurance Co.**
- **The Wildlife Society, Manitoba Chapter**

BioNet is published by the Manitoba Conservation Data Centre, an information source specializing in Manitoba's plants, animals and plant communities.