



Native Plant News

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Spring 2008

Are these guys bugging you?



PHOTO BY CRYSTAL ERNST

An adult Lily Leaf Beetle (red) and fecal covered larva climb down the stem of a lily. It is believed the pest has made its way to Saskatchewan and threatens our native lilies.

Is the lily leaf beetle attacking Saskatchewan's native lilies?

*By TARA SAMPLE
NPSS vice-president*

Could our provincial flower, the western red lily, be under attack? According to Crystal Ernst, who presented parts of her masters thesis at the South Saskatchewan Lily Society general meeting in March, it is entirely possible.

The lily leaf beetle is believed to have originated in Eurasia, the Middle East or North Africa. It is thought to have first been introduced to Canada in 1943 in the packing material surrounding imported lily bulbs. Nearly every province in Canada has documented occurrences of the lily leaf beetle, including our neighbours, Alberta and Manitoba. And, even though there hasn't yet been a documented occurrence in Saskatchewan, Ernst and the South Saskatchewan Lily Society (SSLS) believe that it is almost certainly here – already.

Although the beetles are extremely good flyers, Ernst believes that they have spread across Canada through multiple human caused introductions, rather than simply spreading out from the original introduction in Montreal. After all, she points out that the beetle was not found in Ottawa until 1981.

Adult beetles are 6-8 mm long. They have a bright red abdomen and thorax, with absolutely no stripes or spots, and every other part of their bodies is jet black. Despite their distinctive and bright colouring, this beetle remains elusive and difficult to detect because of its behavior.

They are fast, shy insects that fly away at the first sign of danger. They also “play dead” by tucking their legs under themselves and dropping to the ground, almost always landing belly up, making it nearly impossible to distinguish them from the soil. If you do catch them, Ernst says they produce an alarming squeal by rubbing body parts together.

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spot a cherry
of a pick

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Newsletter Editor:

David Freeman 791-0047

NPSS Address:

Native Plant Society of Saskatchewan

P.O. Box 21099, Saskatoon, SK S7H 5N9

Phone: (306) 668-3940 Fax: (306) 668-3940

E-mail: info@npss.sk.ca Website: www.npss.sk.ca

Native Plant News is a quarterly publication of the Native Plant Society of Saskatchewan (NPSS) and is one of the benefits of membership. Members are invited to submit articles, news, views, photographs and comments. Views expressed by the authors are not necessarily those of the NPSS.

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President's Message

Greetings NPSS members, the smells of spring are upon us – migratory birds are starting to make their return to Saskatchewan and it will not be long before the first blooms are here.

Our Annual General Meeting was held at the University of Regina March 7 and 8 and it was a successful weekend.



There was good discussion at the AGM and the presentations that Malin planned were interesting to those who attended. I would like to thank Malin for her hard work on making this AGM a successful event.

The Board of Directors saw Leonard Howes and Candace Neufeld retire from office, and we thank them for their hard work and dedication over the past years.

Elections were held and Sarah James, Marty Lelliott and Margaret Put were elected to the board. We welcome these three new faces and are looking forward to their input on the board. Chet Neufeld was also ratified as the full-time Executive Director at the AGM.

As we move forward into the summer we will continue to deliver our programming with relation to invasive plants. The Invasive Plant Council of Saskatchewan has had its first meeting and the NPSS will continue to lead this initiative. Our goal is to have this council up and running by the middle of 2009. We will also be hosting a field tour on Dr. Rob Wright's land near the town of Indian Head.

I welcome members to contact myself or Chet at your leisure if you have any suggestions about what the Society could be doing or if you have any questions. I hope that you had a good winter and I look forward to seeing many of you over the coming months.

Michael

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Summer tour spot a cherry pick

By CHET NEUFELD

NPSS Executive Director

Spring has Sprung! That must mean it's time to get ready for the annual NPSS summer field tour.

The Native Plant Society of Saskatchewan invites you to participate in our annual summer field tour on July 19-20, 2008.

We will be spending the weekend exploring the native grasslands, riparian forest and wetlands of a lovely natural area 15 km south of Indian Head. Dr. Rob Wright will be leading the tour in the Cherry Lake area on the property his family co-owns with two other families.

Rob works for the Saskatchewan Parks Service and has been doing botanical work in the grasslands and forests of Saskatchewan for over three decades. He has also led several other NPSS summer tours to success.

The Cherry Lake area is ecologically diverse and supports interesting grassland species such as Downy Paintbrush (*Castilleja sessiliflora*) and the moist-site Long-bracted Orchid (*Coeloglossum viride*). There is no fee for this event, but please contact me at the number listed below so that I know how many people to prepare for. The map gives directions to Cherry Lake Farm.

Itinerary

Friday, July 18

People are welcome to camp at Rob's place on Friday evening. Cooking facilities, refrigerators, barbecues, and toilet facilities are available. **Note:** *You must bring your own drinking/washing water (5-10 gallons per couple). Feel free to swim and wash in the lake, though some might find the water quality too much like a southern prairie lake for their taste.*

Saturday, July 19

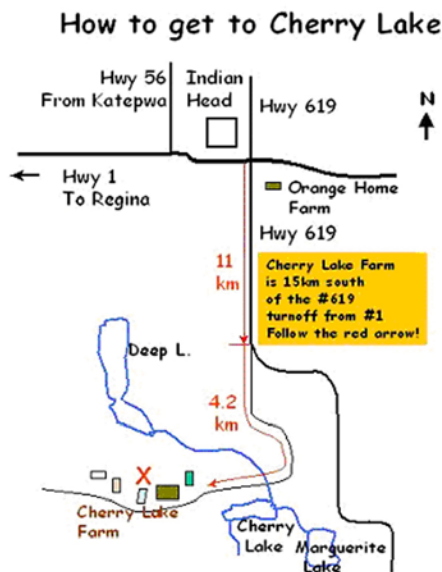
Morning – Campers and early arrivals can come for morning coffee and walk about enjoying the place and the plants on an informal basis.

12 noon – We will begin the formal tour with a hike to the wetlands, beaver ponds and fens. These areas support a wide variety of interesting plant life, including some orchid species. We will also likely see many bird species as well as beavers that maintain the ponds.



PHOTO COURTESY OF ROB WRIGHT

Rob Wright and his daughters, Lani and Angela, pose for a picture at Cherry Lake.



There are also some Saskatoons in the area that may provide some opportunities for grazing along the way, but please note that intensive berry-picking is the preserve of the property owners.

6 p.m. – Return to Rob's yard site for a barbecue, drinks, conversation and a campfire.

Sunday, July 20

9 a.m. – We will walk through the upland aspen forests and the moister balsam poplar/white birch stands in the area. This will give us a chance to see a different suite of plants and birds. We will return from our bush walk via native prairie where we will have the chance to see plant and animal species character-

istic of grassland habitats. We may also get the chance to see a recent prescribed burn on the prairie (if it comes off this spring), which would have greenery sprouting through by the time we visit. Lunch will be at Rob's yard site.

1 p.m. – This is the end of the formal tour program. Participants may explore the area further or perhaps take a side trip to the nearby Strawberry Lakes that are another very diverse wetland site just 30 minutes from Cherry Lake by grid roads.

Participants need to supply their own food and drinks for the weekend. Basic camping is available on Rob's property; however there will be no potable water (bring 5-10 gallons per couple). The yard site has a composting toilet, and a large building with fridge and stove and tables and chairs for eating and gathering. If roughing it is not your style, Indian Head has a number of accommodations. For more information on services and accommodations in Indian Head, please go to <http://64.17.133.62/> or phone (306) 695-3344.

Suggested list of items to bring:

Camera, hat, rain gear, water bottle, insect repellent, binoculars, your favourite flora and bird book, rubber boots for the wetland portion of the tour, sunscreen and sturdy walking or hiking footwear.

Please contact me at 668-3940 or info@npss.sk.ca to register (free) or if you have any questions. ☘

Can you identify these



Match these descriptions

Leafy spurge: Main vertical roots can grow to depths of 26 feet and can spread 15 feet per year. This plant has literally forced some ranchers out of business.

Scentless chamomile: Plants can be summer annuals, winter annuals, biennial or short-lived perennials and the plant's dense, fibrous root system traps soil and moisture, enabling the weed to survive for some time after being uprooted. It is able to produce up to 300,000 seeds.

Baby's breath: Very long taproot (up to 4m) therefore does well in drought and takes what is not available to other plants.

Purple loosestrife: In 1992, it was estimated that this plant was responsible for the loss of more natural habitat across North America than current human development pressure.

Downy brome: Plants dry up at least 4 to 6 weeks before those of native species and its litter is highly flammable and thereby increases fire frequency.

Sea buckthorn: It's dense vegetation prevents most light from reaching the ground, which leads to disappearance of herbaceous plants; unprotected soil is washed away during flooding, resulting in increased siltation of waterways.

Tansy: Mature plant is unpalatable to cattle and horses (little predation) and it can be toxic in large quantities.

Quack grass: Spreads primarily from the growth of rhizomes (underground stems); rhizome fragments as short as 1 cm are capable of producing new plants.



aliens living among us?

with the photographs

Dame's rocket: Spreads to natural areas from abandoned homesteads and the planting of "wildflower" mixes; many gardeners think it is native, but it out-competes native plants and prevents re-establishment of natives by altering the environment to its liking.

Salt cedar: Consumes more water (200 gallons per day per large plant) than native plants; this lowers the water table making water even less available to native plants and causes wetlands and streams to dry up.

Flowering rush: Can tolerate water as deep or deeper than some native species, thereby reducing open water.

Eurasian water milfoil: Stagnant mats can create good habitat for mosquitoes and parasites that cause swimmer's itch. B.C. spends approximately \$1 million each year to try and control it.

NOTE: Some of the plants don't have corresponding pictures and some have more than one, be careful and have fun! *



Go to
Page 8 for
the answers



Photos courtesy of Debbie Nordstrom, Ian Dodkins, William M. Ciesla of Forest Health Management International, Montana Statewide Noxious Weed Awareness and Education Program Archive at Montana State University, and Steve Dewey, Utah State University.

Simplified agenda proves successful

By CHET NEUFELD
NPSS Executive Director

The NPSS annual general meeting was held in Regina on March 7-8 at the University Club on the University of Regina campus.

This year we decided to try a different format as the membership felt it was time for a change.

In previous years the annual general meeting took an entire weekend, was fairly expensive and required a lot of effort for both the organizers and attendees.

This year's event required only a Friday night and Saturday morning, and cost a mere \$30.00. The NPSS also had a discounted student fee (\$15.00) that allowed several students from the university to attend.

As a result, it also helped to recruit new NPSS members who will hopefully stay involved in the organization's activities.

Another welcome change was that the weather finally cooperated for us this year!

On Friday night, attendees were treated to a presentation on the impacts of invasive species on rare plants, given by Darcy Henderson of Environment Canada. The talk raised many important points, and perhaps even more important questions as was reflected by the length of the question period that followed. A wine and cheese social topped the night off.

Saturday morning was lead off by the business portion of the annual general meeting, followed by a panel discussion by Dave Sauchyn and



PHOTO BY CANDACE NEUFELD

NPSS annual general meeting attendees listen to a presentation about the impact of invasive species on rare plants by Darcy Henderson of Environment Canada.

Norm Henderson from the University of Regina and Mike Schellenberg of Agriculture Canada.

All three discussed different aspects of climate change on the prairies and how their work fit into the larger perspective. Once again, the presentation was very thought-provoking and sparked a lively discussion. Lunch followed the panel discussion, concluding the annual general meeting.

The University Club provided an ideal place to hold this year's event as the presentations, display booths and meals could be held all in different portions of the same room.

The food was some of the best that we've ever had at these types of events.

I even heard a few people comment that this was the best NPSS annual general meeting they'd ever attended!

The event drew approximately 50 people, which is a considerable increase from last year's event but lower than 2006. Many thanks to those who attended – I hope to see you all at the next one in 2009!

Also, many thanks to those who helped organize the event, and to our sponsors: Ducks Unlimited Canada, Environment Canada, True North Specialty Products, Meewasin Valley Authority, Saskatchewan Watershed Authority and SaskPower. This event could not have happened without their tremendous support! *

Our commitment to nature starts with this paper

As part of our commitment to the Environment, the NPSS has recently switched to FSC-certified (Forest Stewardship Council) paper. We thought it was only natural (pun intended) that we should try to use trees more sustainably; after all, they're native plants too.

As Earth Day (April 22) approach-

es, we should all think about what we can do in our lives to help the planet.

The FSC is an international certification and labeling system for paper and wood products that come from responsibly managed forests, and verified recycled sources. Under FSC certification, forests are certified against a set of strict environmental

and social standards, and fibre from certified forests is tracked all the way to the consumer through the chain of custody certification system. This means forests, pulp providers, mills, merchants and printers must all obtain FSC certification in order for a product to carry the FSC logo (as can be seen on Page 8 of the printed newsletter). *

Western red lily at risk

Continued from Page 1

After overwintering in the soil, newly emerged adults feed on lily shoots. They actually don't do a lot of damage at this stage. After they mate and lay eggs they become much more destructive.



PHOTO BY CRYSTAL ERNST

Lily leaf beetles lay bright orange eggs on the underside of lily leaves.

The average female can lay hundreds of bright orange eggs on the underside of the lily leaf. Larvae cause the most damage, feeding on the undersides of the leaves. They remain hidden by not feeding right through the leaves until they are about 10 days

old, at which point they start feeding on every part of the lily.

Ernst describes the appearance of larvae as an unappealing black ball of goo because of a fecal shield formed by the larvae. This shield keeps them moist, protected from the sun as well as camouflaged from predators.

When they are fully grown (about the size of a thumb nail), the red abdomened prepupa make a saliva cocoon in the soil to overwinter. There is usually only one generation per year in Canada.

Lily leaf beetles will complete their lifecycle on any *Lilium* or *Fritillaria* species, including our western red lily (*L. philadelphicum*) – which they find very palatable. Ernst found that larvae will try feeding on anything that was taxonomically related to lilies.

Of the native lily relatives she experimented on, there were only two species that it could complete its lifecycle on (indian cucumber and twisted stalk). If given the choice they would feed on *Lilium*, but the potential for this specialist to de-specialize is there.

Ernst discussed a number of possible control scenarios, including biological and

chemical, but stressed that manual control can actually be really effective with vigilance and persistence being key. Inspect lilies diligently and kill any adults, eggs or larvae you may find. It is a full season of work, but people she has talked to claim it works.

What makes the lily so attractive to these beetles?

Ernst says it may come down to chemical ecol-

ogy... the beetles are able to sequester



PHOTO BY CRYSTAL ERNST

Lily leaf beetle in its prepupa state.



PHOTO BY CRYSTAL ERNST

An adult lily leaf beetle climbs the pedal of a lily.

typically repellent chemicals in the lily and use it to their advantage. Just like Monarch butterflies are built to eat milkweed, the lily leaf beetle is built to eat lilies. The red and black colours are typical warning colours that say to predators, "I taste really bad!"

So, what can you do? Tell people about the beetle. Be aware of where your plants are coming from, buy locally or get plants from a reputable grower who can deliver clean bulbs. Monitor your own plants and control outbreaks. Report any sightings to the SSLS

(bag the insect and include a piece of paper with your name, contact information, date and location collected and species of lily that it was collected from). The SSLS is looking for confirmed sightings in Saskatchewan. To report a sighting, contact Dolores Nelson, president of the North American Lily Society at 306-586-3697.

Copies of Ernst's presentation and speaking notes can be obtained through the SSLS at the phone number above and used freely to create awareness of the threat posed by the spread of the lily leaf beetle. *



PHOTO BY CRYSTAL ERNST

An adult lily leaf beetle sits on a lily petal.

Board Member Profile

My name is John Hauer. I am an agrologist who has developed an interest, and some expertise, with native plants over my career. I grew up on a mixed farm in the Lloydminster area. I obtained a Bachelor of Science in Agriculture from the University of Saskatchewan in 1984. For the past 17 years



I have worked in the range management field for Lands Branch of the Saskatchewan Agriculture Department assisting the Branch manage roughly 9 million acres of native and cultivated land. For the past four years I have worked as a resource agrologist inspecting and writing detailed range or pasture plans for the Provincial Community Pastures in

Northeast Saskatchewan. I am located in the Tisdale office and my work allows me to regularly interact with the native plants of the Parkland and Boreal Transition zones.

I have been a member of the Native Plant Society of Saskatchewan for the past four years and have been on the Board of Directors for the past two years. I enjoy the mix of diverse interests that the members of the NPSS have, from backyard naturalists or conservationists to professional range ecologists and everything else in between.

My interests include chasing our 17-year-old son to his various sporting activities and trying to keep active myself at some level. ✿

And the answers are . . .

- | | |
|---------------------------|------------------------|
| 1. Flowering rush | 7. Quack grass |
| 2. Dame's rocket | 8. Scentless chamomile |
| 3. Leafy spurge | 9. Purple loosestrife |
| 4. Eurasian water milfoil | 10. Downy brome |
| 5. Quack grass | 11. Sea buckthorn |
| 6. Tansy | 12. Salt cedar |

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