

Native Orchid News:

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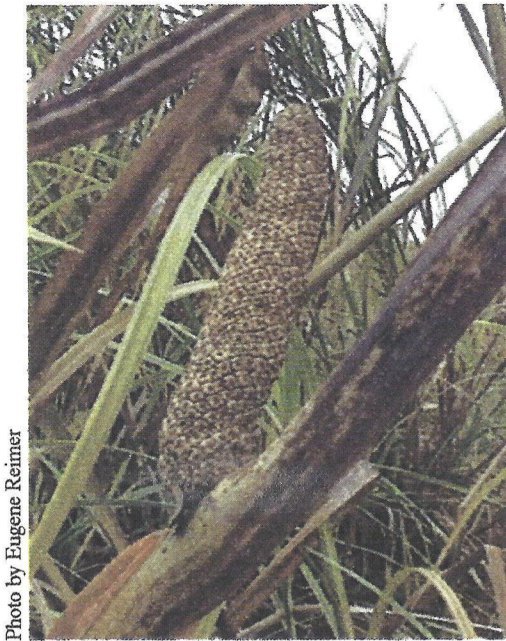


Photo by Eugene Reimer

Native Orchid Conservation Inc.

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Members' Night

Friday, February 6, 2004

Rare Plant of the month

Sweet Flag
(*Acorus calamus*)

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Announcing NOCI's 3rd Annual Members' Night, Friday, February 6, 2004

Don't miss this year's Members' Night! We have an exciting evening planned for you. We are very excited to have Pat MacKay and Bob Lamb, both NOCI members and retired University of Manitoba entomology professors, present a slide show and talk called "Biologists in Wonderland: Bush-walking in Australia". Also, our own Board members, John Neufeld and Eugene Reimer will do a presentation on their trip to the Bruce Peninsula Orchid Festival. Finally, our president, Doris Ames will give us a report on the past summer's projects and activities.

Date: Friday, February 6, 2004

Time: 7:30 p.m.

Place: Manitoba Lawn Bowling Centre
1212 Dakota Street
Winnipeg

RSVP: by Feb. 4, 2004 to Peggy Bainard Acheson, 261-9179 (evenings or leave message)

We will also be recognizing the many volunteers that have supported us over the past few years. Warm up your winter! Come out to enjoy the presentations, see the displays, participate in the raffle, and generally have a good time. Everyone is welcome including guests. We are extending this invitation to the general public through public service advertisements in community newspapers, on Shaw Cable, and on our website (www.nativeorchid.com). Refreshments will be served.

PRESIDENT'S REPORT - DORIS AMES

As an exciting and busy year draws to a close, I want to thank our members for staying with us and helping to make NOCI grow and prosper. We are busy with our book project now, writing species accounts and other chapters, doing research and starting to plan the layout. Our committee members are working together very well and the book project is running on time and according to plan. Over the summer, committee members made many new discoveries and took many lovely pictures of Manitoba orchids. Lorne Heshka and Ian Ward went especially far afield and I know if there is a rare orchid out there, they are going to know where it is. We received an additional grant of \$2000 from the Winnipeg Foundation to help us with publishing costs and we are very grateful for this. We are preselling copies of our book now at the special price of \$15.00. You will have received an order form along with your last newsletter. Please support us by pre-ordering a book if you have not already done so. Alice Warren is in charge of advance sales.

We have also continued to identify areas that contain species at risk and this year for the first time we put a sign up in an area that contains many native orchids, in an effort to protect it. This 300ha site is on Sungro Horticulture's licence area on the Moss Spur Road and contains many Ragged Fringed Orchids as well as other rare plants. With Sungro's help we put up a sign to make people aware of this site and the need for its protection. Board member, Eugene Reimer, and the talented people at Speedpro Signs worked together to design a very attractive sign. Sungro employees kindly put it up for us. You can see a photo of it on our website. We know that A.T.V.'ers and others are often not aware of sensitive plant habitat when pursuing outdoor activities and this signage should help to make them more aware. Sincere thanks to Sungro Horticulture for helping to sponsor this sign.

This is also the time when we ask all of you to renew your memberships. We rely on this revenue to run the organization as most of our funds are project dedicated. Peggy Bainard Acheson, our membership chair, has a special reminder for you in this newsletter. A NOCI membership makes a nice Christmas gift. This is also a good time to make a donation to NOCI. Many of you have been very generous in the past and we hope you will continue to support us. Sincere thanks to all of you who helped us all through the year. As you know we issue tax receipts for donations of \$10.00 or more.

I would like to invite you to attend our Members' Night which will take place on Friday, February 6th at 7:30PM at the Manitoba Lawn Bowling Centre. Peggy and John have great plans, which include a little fund-raising raffle. Guest speakers will be entomologists Pat MacKay and Robert Lamb. Their presentation is entitled "Biologists in Wonderland: Bushwalking in Australia". They will discuss their recent trip to Australia and among other things, the beautiful and diverse orchids they found there. As well John Neufeld and Eugene Reimer will treat us to a powerpoint presentation of their trip to the Bruce Peninsula this summer to attend the orchid festival. That evening we will also honour our many member volunteers who have helped us with displays, field trips, as speakers at functions and in many other ways. Refreshments will be served. I look forward to seeing all of you there so I can thank you in person. If you need a ride, do not hesitate to phone as we can usually make arrangements to car pool.

Later on in the spring we have speaking engagements and many display opportunities booked, including the shopping centres and the Manitoba Orchid Society's orchid show. We hope to see you there.

Finally I would especially like to thank all the board members. You have done great work this year and have remained really dedicated to our mission even though all of you are very busy. When people notice our successful projects, our professional looking newsletter, our interesting functions, organized meetings, fun-filled field trips, and our first-class website, they are seeing your work. Thank you and best wishes for the holiday season.

RARE PLANT OF THE MONTH (SEE COVER PHOTO)

Sweet Flag (*Acorus calamus*)

By Doris Ames

Clumps of this aquatic plant can be found growing in wet ditches, swamps and marshes in Manitoba. It is often overlooked because it superficially resembles cattail and iris. The plant is considered to be rarely seen, but not actually rare, by botanists in Manitoba. The Manitoba Conservation Data Centre assigns *Acorus americanus* an SRANK of S5 and *A. calamus* SR. (SRANKS go from 1-5, where 1 indicates the plant is very rare throughout its range and 5 indicates it is secure throughout its range. R indicates that it has been reported in Manitoba but specific documentation is lacking for either accepting or rejecting the report. For a more complete explanation, please consult the link to the CDC on our website at www.nativeorchid.com). The sword-shaped leaves with crimped edges can be up to 1.25 metres in height and are yellow-green in colour. It is this yellow-green colour, the sword-shape of the clumps of leaves, and the sympodial flower spikes that distinguish it from iris and cattail. The sympodial leaves (this structure functions as both a flowering stem and a bract) contain a 5-10cm spadix that sticks out at an angle from the leaf. The remainder of the leaf extends up past the spadix like a bract. The spadix contains many yellowish-green flowers. Evidently in fertile species, these flowers are followed by inconspicuous, hard berries containing gelatinous material and seeds. The thick, fleshy, long roots are sweet-smelling and pink inside. The whole plant gives off a beautiful smell when crushed but the roots have the strongest perfume because of the concentration of fragrant oil.

Recent DNA evidence reveals the genus *Acorus* to be the oldest surviving line of monocots. This plant has been used medicinally and culturally everywhere it is found in the world from Ancient Egypt to North America. Aboriginal people in North America refer to it as *wike* or sometimes ratroot because it is a favourite food of muskrats.

Europeans and other residents of the Old World once considered it a strong aphrodisiac and hallucinogenic. In North America, it was used by Hudson Bay employees and aboriginals, somewhat as the coca leaf is in South America, to combat fatigue and hunger and increase stamina. Settlers also used it to treat stomach cramps, heartburn and colic. The dried root, cut into thin disks, is used by Ojibway people in southeastern Manitoba today as an all-round panacea and specifically, to treat high cholesterol, and when grated and mixed with white water lily root, to treat diabetes. It has many interesting properties and its use has been so widespread in North America, that it has, at times, been used as a medium of trade among native people. The pleasant taste is aromatic, bittersweet and spicy all at the same time. Care must be taken to avoid consumption of plants growing in contaminated water, as along the sides of fields and highways, because toxins can collect in the roots. Sweet flag is banned in food substances in North America at present because of concern there may be a cancer-causing chemical present in some Asian and European species. It was removed from the National Formulary in 1950. However recent research implies this problem may not extend to species in North America. The oil of sweet flag has been scientifically established to have antibacterial, antifungal and anti-amoebic properties. At present it is used most extensively in the perfume industry. This harkens back to the times when its fresh and beautiful fragrance perfumed medieval cathedrals where it was used as a "strewing herb" and spread on the floors.

There is much confusion over which species we have in Canada. The species *A. calamus* was brought here by European settlers and distributed across the country. This species originated in Asia where it is still found today. It is sterile and never produces any seeds in Europe or North America for several reasons. The right pollinator may not be present and some European species produce sterile pollen. These species spread by root propagation only. The North American indigenous species *A. americanus* is said to be fertile, producing berries with seeds. Aboriginal people would have distributed Sweet Flag species widely and perhaps cultivated it as well. By the use of pollen-staining techniques and other methods, botanists working with herbarium specimens from different parts of the country in 1984, concluded that all species in Manitoba must be *A. americanus*. However, there are

other differences between the two species, the chief one being that *A. americanus* produces berries and *A. calamus* does not. Differences in leaf length, width, and structure and the length and shape of the spadix between species also help us to tell them apart.

During the past three years when NOCI volunteers have been doing botanical surveys to look for rare plants, we have only found six locations where there are sizeable clumps of Sweet Flag. We went back to see some of these plants in September and October and we never saw any that appeared to have developed berries.

In 2002, Eugene Reimer and I did some measurements of plants located along Hwy.#12. The height of the vegetative leaf was 105cm and the width was 1.5cm. Only one of the leaf veins (the midrib) was prominent. The sympodial leaf was 103.7cm and the spadix itself measured 6.5cm. There were, what we took to be, very hard dried up flowers present on Oct. 10th and 17th when we did these measurements. We cut one of these "dried up flowers" open and we couldn't see any gelatinous material or seeds that would indicate these were berries. Our observations along with the measurements might indicate that there are at least some infertile plants in southeastern Manitoba that may be *A. calamus*. We submitted some specimens to the University of Manitoba herbarium and perhaps further studies will reveal just what species they are.

This plant species is of interest because of its many potential uses in medicine and in the perfume industry. This wetland plant is very easily grown from sections of the root and needs only water with a slightly acidic pH and sunlight, to reach maturity in two years. Sweet Flag may prove to be a species that could be used to help restore damaged wetlands while at the same time providing a valuable crop.

If you wish to learn more about this interesting plant, you can consult the following sources:

Aboriginal plant use in Canada's northwest boreal forest

Co-published by: Natural Resources Canada, Canadian Forest Service
Her Majesty the Queen in Right of Canada, 2000

Small, Ernest and Paul M. Castling 1999. Canadian Medicinal Crops. NRC Research Press, Ottawa, ON

Flora of North America FNA Volume 22.

Packer, J. G. and G. S. Ringius 1984. The distribution and status of *Acorus* (Araceae) in Canada. Can. J. Bot. 62: 2248-2252.

<http://www.woodlotalt.com/publications/BotNotesv1n2.PDF> (Second article)

<http://www.rook.org/earl/bwca/nature/aquatics/acorus.html>

<http://www.lycaeum.org/~iamklaus/acorus.htm>