

IRIS

Newsletter of the Alberta Native Plant Council, Garneau P.O. # 52099 Edmonton, Alberta T6G 2T5

Summer 1992

Issue 14

WANTED: Purple Loosestrife Observations

reprinted with permission from The Steward, April, 1992. Natural and Protected Areas, Forestry, Lands and Wildlife

Editor's note: Purple loosestrife was added to the Alberta list of noxious weeds under the Weed Control Act by Alberta Regulation AR 78/92 on Feb. 20, 1992. Under requirements of the act, noxious weeds have to be controlled by the landowner. If you spotthis species, please call the Natural and Protected Areas office at 427-5209.

Purple loosestrife (Lythrum salicaria, L. virgatum and hybrids) is a highly aggressive plant that invades wetlands, where it chokes out native plants and eliminates food and shelter for wildlife.

It is a serious problem in its native Europe and has spread over southeastern Canada and throughout the northeastern United States since sometime in the last century. It has also spread through British Columbia, entering along the west coast. In Alberta there have been 15 confirmed sightings to date.

Why the concern about purple loosetrife? Its attractive appearance makes it a popular addition to flower gardens, but it has escaped cultivation in recent years and invaded native land-scapes.

The relatively recent and rapid westward expansion and the plant's rise to dominance in many inland marsh and river systems worries botanists, wetland ecologists and waterfowl managers. According to Diana S. Horton, associate professor with the University of Iowa's Botany Department, "Lythrum has not yet become established in Alberta wetland habitats. But the studies that have been done on this plant indicate that it is just a matter of time before it does, unless steps are taken to stop sales in nurseries and garden centres to eradicate it from gardens."

How can you help?

Successfully managing and controlling the spread of purple loosestrife begins with knowing what to look for, where and when.

...continued on page 4

The Alberta Environmental Protection and Enhancement Act

reprinted from Alberta Environment, Legislation and Regulatory Initiatives

Comprehensive new environmental legislation for the 1990's and beyond was introduced in the legislature on the 20th of June 1990 by Alberta Environment Minister, Ralph Klein. The tabling of the proposed legislation was the culmination of an intensive five-stage consultation program over the last two years which allowed Albertans the opportunity to express their views and provide their comments.

The Act not only consolidates nine former statutes into one legislative package, providing Albertans with a streamlined, effective and consistent framework of laws, regulations and guidelines but it is also based on 10 underlying principles which reflect the input of Albertans and the view of the government. Principles such as shared responsibility, public involvement, sustainable development and intergovernmental cooperation are central to the legislation.

...continued on page 3

In This Issue

Purple Loosestrife — In the Garden	2
— Blocontrol	5
— Blocontrol	2
Books and Publications	2
Canadian Heritage Rivers 4	
Trip & Conference Schedules7-8	

Purple Peril in our Gardens?

by C. Dana Bush

Are garden cultivars of lythrum a danger to our wetlands or not? Conflicting information from wildlife biologists and horticulturists have painted a confusing picture for those of us with gardens. New information has recently been published showing that garden cultivars are indeed unsafe.

Garden plants are generally cultivars of *L. virgatum*, *L. alatum* and *L. salicaria*, but the identification of these plants may not be reliable. B.L. Harper reports that nurseries in Twin Cities, Minnesota sold plants labelled as lythrum cultivars which were actually *L. salicaria*. Greenhouse labels are no assurance that the plants are sterile.

In past reports the cultivar 'Morden Pink' (*L. virgatum*) was deemed safe. The latest information from K. Ottenbreit and R. Stainforth at the University of Manitoba indicates that 'Morden Pink' (*L. virgatum*) and 'Morden Gleam' ('Morden Pink' x *L. alatum*) are significantly fertile when crossed with wild *L. salicaria* and 'Dropmore Purple' (*L. virgatum* x *L. salicaria*) is partially fertile. The research shows that the cultivars are indeed self sterile but when crossed with the wild populations of lythrum or, in the case of 'Dropmore Purple' and 'Morden Gleam' with each other, they are capable of producing large amounts of seed.

Given this information, it seems evident that we should stop selling lythrum in garden centres, and we should be extremely cautious about existing garden plants, If your garden lythrum sets seed, pull it out and burn the plants. If you are near a wetland, or your land occasionally floods, do not grow any lythrum regardless of the parentage.

Ali, Shafeek. 1992. Purple Loosestrife in Alberta. For: Purple Loosestrife Workshop, Ottawa, Ontario.

Ottenbreit, K. and R. Stainforth. 1991. Crossability of cultivated and naturalized populations of purple loosestrife (*Lythrum salicaria*). Canadian Botanical Association conference.

Harper, Bonnie L. 1988. A Minnesota counterattack on Purple Loosestrife (*Lythrum salicaria*). In: Proceedings of the Ninth North American Prairie Conference.

Thompson, D.Q., R. L. Stuckey, E.B. Thompson. 1987. Spread, Impact and Control of Purple Loosestrife (*Lythrum salicaria*) in North American Wetlands. United States Department of the Interior, Fish and Wildlife Service Research 2.

Alberta Native Plant Council Executive

Chairman: Elisabeth Beaubien (Dept. of Botany, University of Alberta)

Vice-Chairman: Cliff Wallis (Consultant, Naturalist, Calgary)

Secretary: Loma Allen (Biologist, Natural and Protected Areas, Alberta

Forestry, Lands and Wildlife)

Treasurer: Joyce Gould

Northern Director: Dr. Joan Snyder (Grande Prairie) Central Director: Mike McNaughton (Red Deer)

Southern Director: Kathleen Wilkinson (Biologist, Consultant, Calgary)

Director (Federation of Alberta Naturalists representative): Derek Johnson

(Canadian Forestry Service)

Native Seed Search Underway

Blooming Prairie is an all-Canadian company based in Edmonton, Alberta that cultivates and collects flowers and herbs for sale. Native plants are a large part of our inventory and lately we have had many requests for wildflower seeds.

We would like to increase our involvement in native plants. It is our policy to promote Alberta products, and Alberta style, and to supplant imports whenever possible.

We will BUY SEEDS from the ANPC or its members at competitive prices. We are also looking for a PERMANENT PART-TIME WORKER to help get this part of the project started up and running. The City of Edmonton wants to cover 150 ha of land with wildflowers in 1992, and more in future years. Can you help out here? You can promote native plants and get them growing on roadsides and in home gardens for the enjoyment of all.

Please contact Katie Benschop at *Blooming Prairie* (462-3257 Edmonton), or mail to 3119-89 St. Edmonton, T6K 2Z1

Editors Note: A list of seeds and plants available from this company will be included in next year's native seed source/ suppliers directory in IRIS.

HAVE YOU
RENEWED YOUR
ANPC
MEMBERSHIP?

Medicinal Herb Trade

Survey

reprinted from Wildflower, Vol.8 (1)Winter, 1992

"Douglas Fuller has compiled an overview of the Herb Trade in the United States and its implications for conservation of native plants for World Wildlife Fund—U.S. This seems to be one of the first efforts at a comprehensive look at this trade that impacts many of our native plants. Fuller lists 71 native North American plants in good demand by the medicinal herb market and gives case studies for a few, such as the purple coneflower and Pacific yew."

Study of Weed Potential

reprint from Wildflower Vol. 8 (2) Spring, !992

"Sarah Reichard, a doctoral candidate in the Center for Urban Horticulture at the University of Washington, Seattle is studying the problem of predicting the escape and weed potential of new plant introductions. While concentrating on the northwest, her study should shed light on procedures applicable throughout the country."

Profits from Plantings

reprint from Wildflower Vol. 8 (2) Spring, 1992

"Noted from The Avant Gardener. Reports from across the country show the value of public wildflower plantings. Highway officials in Wisconsin say vandalism at highway rest areas and tourist information stops have been reduced near plantings, perhaps because the areas are frequented more often. Maryland claims a decrease in mowing-fertilizer-herbicide costs along highways, from \$690/acre/year for grass to \$31 for meadow plantings. Vermont officials report a reduction in accidents in areas with roadside wildflower plantings. The flowers may calm drivers or bring their attention to the road."

continued from page 1 Environmental Protection...

The act addresses and clarifies a wide variety of environmental subjects. A few of the highlights are as follows:

- •increased public involvement through improved public access to information, and more opportunity for public consultation and participation in all aspects of environmental protection and enhancement,
- •establishment of a legislated environmental impact assessment process,
- •mandatory spill reporting and clean-up,
- •statutory requirements for waste reduction and recycling,
- •provisions to address clean-up of existing contaminated sites,
- •timely and effective enforcement mechanisms including increased penalty provisions, including fines up to \$1 million and up to a two year jail term,
- •responsibility of directors and officers of private corporations and responsibility of provincial and municipal officials where an offence has been committed.

"This Act gives Albertans more opportunity for involvement in decision making while at the same time providing a level playing field which protects Alberta's land, air and water for future generations," said Mr. Klein.

Further information or copies of the legislation may be obtained by calling toll free, 1-800-661-5586. For additional enquiries, please contact Kim Lalonde, Alberta Environment, 427-0047.

Publications

- American Forestry Association. 1989. **Shading our cities—a resource guide for urban and community forests**. Island Press, Washington D.C. 333 pp.
- Falk, D.A. (ed.). 1991. **Genetics and conservation of rare plants.** Oxford Press. 272 pp. [\$45 U.S.]
- Gayton, D. 1990. The Wheatgrass mechanism -science and imagination of the Western Canadian landscape. Deals with natural history and landscapes of the northern prairies. Fifth House Publishers, Saskatoon, 156 pp. [\$16.95 Cdn]
- Hickman, P.M. 1991. **Plantwise**. Federation of Ontario Naturalists, Kids Can Press Ltd., Toronto, Ont. 96 pp.
- Knopf, J. 1991. Xeriscape flower gardening a waterwise guide for the Rocky Mountain Region. Johnson Books, Boulder, Colo. 182 pp.
- New York Botanical Garden. 1991. Manual of Vascular Plants of N.E. U.S. and Adjacent Canada. The first comprehensive flora for the region in 40 years. New York Botanical Garden, Bronx, N.Y. 10458 [\$74.60 U.S.]
- Revel, R.D. 1992. Plant families of Dinosaur Provincial Park. Alberta Naturalist 22 (1): 8-10.
- Weaver, J.E. 1991. Prairie plants and their environment. University of Nebraska. 276 pp. [\$12.50 U.S.]

continued from page 1 Loostrife...

Distinguishing features

- •1 m to 2 m (3-6 ft.) high
- a square, woody stalk with several stalks per plant
- •long, pink/purple spiked flowers from June to September

Where to look

- •in shallow water, wetlands and on wet soils
- •in cattail marshes, sedge meadows, open bogs and fens
- along stream and river banks, shores of lakes and near shore areas
- •in ditches and along ditch and dike banks
- on exposed or otherwise disturbed wet soils (loosestrife needs a wet area with periods of low water levels)

When to look

 loosestrife is in bloom and most easily recognized from early July through the end of August

How to control smaller populations

When you encounter individual plants or small clusters (up to 100 plants):

- •hand pull the younger plants
- dig out older plants, especially those in deep organic soils, such as bogs and fens
- •"tease" roots of older plants loose with a small hand cultivator
- •do not break the roots or they will re-sprout
- remove, dry, and if possible, burn all pulled parts (plant parts can re-root)
- do not mow because the plant parts may re-root

Please inform your nearest district agriculturalist or Ducks Unlimited office with any sighting of this plant in Alberta's wetlands.

Alberta Purple Loosestrife Sightings City of Medicine Hat 1 acre, 0.5 acre; 50 plants Coaldale Nurseries 500 plants Village of Alsike 200 plants Hawrelak Park, Edmonton 10 plants Sherwood Park 100 plants County of Lac Ste Anne 10 plants South of Spruce Grove 3 acres Lake Wabamun 5 acres City of Edmonton 8 plants Tyrell Museum 15 plants Long Island Lake 1 plant Sturgeon River Valley 25 plants

Several Plants

8 plants

50 plants

Canadian Heritage Rivers System

Inglewood Bird Sanctuary

Jail Lake-Lethbridge

City of Leduc

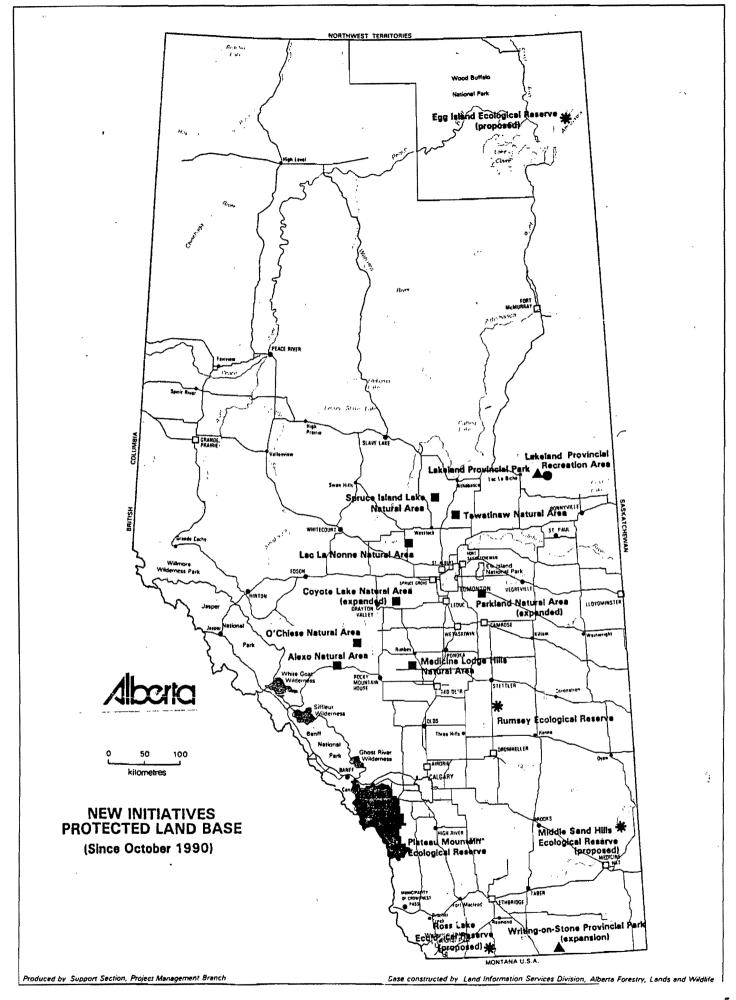
The Canadian Heritage Rivers System Program provides national and international recognition to rivers having natural, cultural and/or recreational heritage values of national significance.

The program is a federal/provincial/territorial cooperative initiative, supporting the commitment to provide long-term management of heritage rivers for the benefit and enjoyment of Canadians and visitors, now and in the future. Under the program, designated rivers must be managed to conserve the heritage resources for which they are nominated. The Heritage Rivers designation can allow for multipurpose use, while ensuring the preservation of identified heritage resources. The province or territory is responsible for the management of Canadian Heritage Rivers within its jurisdiction.

Alberta has two Heritage Rivers: the North Saskatchewan river where it flows through Banff National Park and the headwaters of the Athabasca River in Jasper National Park. In addition, various sections of Alberta's rivers may meet the criteria of the Canadian Heritage Rivers System for future consideration.

In recognition of Alberta's potential involvement, Alberta Environment Minister, Ralph Klein, formed an Advisory Committee in 1991 that would develop recommendations on how the program could be implemented in this province. The Committee's report is due this spring. Subsequently, the Minister of Alberta Environment will be presenting a proposal on Alberta's potential involvement in the Canadian Heritage River System.

Ref: Donna Babchisin, Communications Branch, Alberta Environment, (403) 427-6267, March 1992.



Possible Biocontrol for Purple Loosestrife

by Carole Calenso-Fair

In 1987 a cost benefit analysis in 19 states in the US showed a \$46 million annual loss attributed to infestations of purple loosestrife (*Lythrum salicaria* L.). This figure took into account the impact on both agriculture and recreation.

Hand pulling, manipulation of water levels, mowing, cutting, burning and herbicides have all been used in attempts to control Lythrum salicaria. Such methods have been successful on small stands of young plants in the short term. However, they are costly, can damage adjacent plants and require repeated treatment to keep populations in check.

American researchers have done extensive research in the northeastern U.S. in search of naturally occurring diseases or insects that might work significant damage to *L. salicaria* populations. When none were found they went to Europe, where this plant originated, to seek out exotic natural enemies. From a list of 15 species closely linked with *L. salicaria* in European sites, 3 highly host-specific species were chosen for further testing and research in the USA.

Hylobius transversovittatus is a rootinfesting weevil. Both adult and larval weevils seriously damage the root system. This damage may kill the plant or stunt it enough that fewer stems and consequently, fewer seeds are produced.

Galerucella calmariensis and G. pusilla are leaf feeding beetles with similar life cycles and feeding habits. At outbreak densities the adults and larvae kill loosestrife seedlings, completely defoliate mature plants and destroy or prevent the formation of flower spikes. At lower populations the adult and early larval feeding prevent normal growth of L. salicaria by destroying growth tissue. Their continued feeding delays and often prevents the production of flower spikes.

Suitable American release sites were carefully selected in 1989 and 1990. The first releases of the 3 potential biocontrol agents were scheduled for 1991. After release, each site was to be monitored for the establishment of the insects, changes in the purple loosestrife populations and other vegetation and the relative impact of the various combinations of species released on the plant population.

If these insects are as effective as early research indicates, they may provide permanent, effective, relatively inexpensive and environmentally safe control for purple loosestrife.

Hight, Stephen D. & John J. Drea, Jr.
Prospects for a Classical Biological
Control Project Against Purple
Loosestrife. Natural Areas Journal Vol.

Edmonton Plant Study Group

Rediscover some of the good planthunting grounds in Edmonton. Become a part of the regular Thursday evening outings of the Edmonton Plant Study Group. Some of the scheduled outings include White Mud Creek, the beautiful Edmonton rivervalley, Laurier Park and the Kinnaird Ravine. If you want details on these and many more enjoyable "night's on the town" contact any of the following: Derek Johnson (436-8231), Patsy Cotterill (481-1525) or Elisabeth Beaubien (438-1462).

Usage of University of Calgary Herbarium

Recently the Department of Biological Sciences, U. of C. proposed closing the university's herbarium to the public, due to budget cuts. Along with the collection itself the herbarium also boasts an invaluable and comprehensive library on rare plants, ethnobotany, medicinal and poisonous plants, flora and ID guides, historical reports and photographic collections.

A number of individuals wrote to Dr. Ron Davies, Head of the department, requesting that the proposal be reconsidered. Southern Director Kathleen Wilkinson wrote on behalf of the ANPC, stating that excluding the public from this facility would create a tremendous loss to the many environmental consultants who use the herbarium as well as researchers, medical personnel and agriculturalists who make extensive use of this resource. Various interest groups such as Calgary Field Naturalists' Botany Study Group, Junior Forest Wardens and the ANPC use the plants for workshops and presentations.

Editors Note: Thanks to public pressure the initial decision to close the herbarium to all public users has recently been modified. It will now be available to individuals who make arrangements with Dr. C. C. Chinappa, Curator (office 220-7465 or herbarium 220-5262).

This reinstatement of partial public access is gratefully acknowledged by the ANPC.

IRIS Summer '92 — Issue 14

1992 Field Trips

- *** Trips sponsored by Edmonton Plant Study Group.
- +++ Trips Sponsored by Calgary Field Naturalists' Society

July 16, Thurs.	+++Brown Lowery Natural Area. Meet at SOUTHCENTRE or at the parking lot at Brown Lowery. Habitats: spruce forest with aspen groves, willow and alder thickets, a lodgepole pine forest, and some open slopes.				
July 23, Thurs.	+++Aspen Parkland Biome, Canadian Wilds Project, Calgary Zoo. Meet at ALTADORE SAFEW at 7:00 p.m. at the south gate to the Zoo. The Zoo will be closed, and parking will be administration building inside the zoo. Advance notice is required if you plan to bring your car Eadie, Curator of Plant Collections, will be our guide.				
July 24-26, FriSun.	Wild Flowers of Jasper National Park. Enjoy a weekend botanizing the high country with Elisabeth Beaubien, coordinator of the Alberta Wildflower Survey, and President of ANPC. Eve include an evening slide show and 2 days viewing alpine wildflowers. \$195 with accommodati \$110 without. For more information contact the Jasper Institute, Box 2337 Jasper, Alberta, 852-40				
July 26, Sun.	Storm Creek, Kananaskis Country. Trip leader is Joan Williams, vegetation ecologist who has work extensively in this area. Meet at 10:30 a.m. at the Highwood Pass parkling lot (on Hwy. 40, in Peter Lougheed Provincial Park; approx. 1 1/2 hour drive from Calgary), and be prepared for a moderatly steep climb into the alpine. For more details, contact Joan (277-9301, Calgary).				
July 30, Thurs.	+++Nose Hill, Porcupine Valley. Meet at MARKET MALL or at the parking lot opposite Berkley Gate NW. Where not disturbed the open areas on the south side are rough fescue, with willow and aspen groves on the lower north-facing slopes. We often see yampa here.				
Aug. 6, Thurs.	+++Tom Campbell Hill. Meet at ALTADORE SAFEWAY or on the east side of the Zoo parking lot, of Georges Drive (the lot north of Memorial Drive). A lot of undisturbed prairie remains, but ther extensively disturbed areas as well, which the community (working with the Parks department going to reclaim. By this time some of the reclamation work and perhaps a burnwill have been department. Bryon Benn, who has researched and worked on planning for the area, will be the guide.				
Aug. 16, Sun.	***Dick Hilson's Nursery. This nursery has appeared in ANPC's source lists for native plant material. Meet at the Provincial Museum in Edmonton at 8:30 a.m. for the trip to Rochester, 1 1/4 hours north of Edmonton.				
Aug.30, Sun.	+++Williams Coulee. Meet at SOUTHCENTRE at 9:00 a.m. or at 10:00 at the SW 1/4 of Sec 15, Twp 10 Range 29, W4M, due west of Nanton 5 miles on pavement (the road to Chain Lakes) plus 3/4 mile of gravel (west of the intersection at which the paved road turns south). Phone in advance if you need ride.				
Sept.20, Sun.	+++Ptarmigan Cirque. Meet at MARKET MALL at 9:00 a.m. or meet at Highwood Pass parkling Lot 10:00 - 10:30 a.m Bring water and lunch and be prepared for a warm autumn day with golden larches, or alternatively, a snowstorm. This is a short hike which gains elevation rapidly. Phone in advance if you need a ride. Plan to come back on your own if you want to be back before 6:00 p.m.				

+++Information for CFNS Trips:

Except as noted, Meeting time is 6:30 p.m.

MARKET MALL: Northeast corner of the MARKET MALL parking lot, at 40th Ave. & Shaganappi Tr., NW.

SOUTHCENTRE: In front of Save-On Foods (or is it Safeway?) at northeast corner of Southcentre Shopping Centre. (Bonaventure Dr. & Anderson Rd. SW)

ALTADORE SAFEWAY: Southwest corner of the Safeway parking lot at 18th St. and 34th Ave. SW

DEERFOOT MALL: DEERFOOT MALL parking lot at 64th Ave. and Deerfoot Tr. NE, north side of lot, north of the Bay.

The CFNS trips are subject to change without notice, so if you have been out of touch, or want us to expect you, phone! Unless noted, the leader is Jim Posey; phone 560-2551. If no one has phoned, and no one comes to the first meeting place, the trip will be cancelled. Prior arrangements are required only as noted.

IRIS Summer '92 — Issue 14

Conferences, 1992

July 23	Wildflower Identification Course. Part of Olds College Horticulture Week. Day long field trip to natural areas around Olds. For more information call (403) 556-8344.					
July 23-25	Society for Range Management Summer Tour in the Hand Hills, 20 miles south of Hanna. Visit the Hand Hills Ecological Reserve, a seed farm, a mining operation, the Ducks Unlimited Prairie Care Program and other interesting related projects. For more information contact Barry Adams (Range Specialist, Alta. Govt., 381-5486, Lethbridge).					
July 23	The re-establishment of Native Grassland will be the topic of keynote speaker Ron Reese of North Dakota. This takes place in conjunction with the aforementioned range tour. The talk will be at Alsask, Saskatchewan. Contact Dale Weibrot for details (306 778-8305).					
August 6 - 9	North American Prairie Conference Windsor, Ontario. Emphasis is on the importance of environmental preservation and protection, linking these concepts to the Native philosophy of the land. Conference trips are planned to Walpole Island, Oak Openings, Ohio; Pelee Island, and the Ojibway Prairie Complex. Sponsored by the City of Windsor, Dept. of Parks and Recreation; the Walpole Island First Nation—Council of Three Fires and the Ontario Ministry of Natural Resources. For more information, contact Patricia Lewis, 2450 McDougall St. Windsor, Ont., N8X 3N6. (519-255-6877 or FAX: 519-255-7990).					
August 9- 14	4th Annual Conference Society for Ecological Restoration, University of Waterloo, Waterloo, Ont. Themes include: park and forest management; restoration of urban, urban fringe and rural lands; aboriginal perspectives on restoration; regional landscape planning; environmental education; community-based restoration. Debates, field trips. Contact Nik Loupoukhine, Acting Director, Natural Resources Branch, Environment Canada, 10 Wellington St., Hull, Quebec K1A 0H3 (819-997-4900).					
August 10 - 12	Eastern Native Plant Alliance Annual Meeting, Connecticut College Arboretum, New London, Connecticut.					
August 13 - 16	Canadian Nature Federation 1992 Conference. Québec City, Québec. Workshops, activities and tours. Organized by union québécoise pour la conservation de la nature, FOSEM, La Société linnéenne du Québec, Le Club des Ornithologues du Québec, Canadian Wildlife Service. Contact 169, 76° Rue Est, Charlesbourg, Que. G1H 7H6 (418-628-9600/418-626-3050)					
September 14 - 18		Wetlands Conference, Ohio State Unive	rsity, Colum	nbus, Ohio.		
September 16 - 18	White Pine Sympo	osium, Duluth Entertainment Convention Cer	nter, Duluth	, Minnesota		
September 22 - 23						
October 27-30	Rediscovering America — Natural Areas in the 1990's. Indiana Memorial Union, Indiana University, Bloomington, Indiana. Some workshop topics include: urban natural areas, restoration of ecological communities, natural areas management, species introductions, and social aspects of natural area management. There will be field trips to old growth forests and many other special communities in the area. Registration: Indiana University Conference Bureau, IMU Room 677, Bloomington, IN 47405. (812) 855-6451.					
IRIS is published three to four times yearly by the Alberta Native Plant Council. Subscription is included in membership to the A.N.P.C. The Council's aim is to increase knowledge of Alberta's wild flora and to preserve this diverse resource for the enjoyment of present and future generations.		Memberships and letters to the editor are welcomed and should be sent to: Alberta Native Plant Council Garneau P.O. # 52099 Edmonton, Alberta T6G 2T5	Member \$ 15 \$ 25 \$ 10 \$ 10 \$ 50 \$ 500	rship fees are: Individual Family Student Retired Corporate Lifetime		

IRIS Summer '92 — Issue 14