



IRIS

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

Winter 1994

Issue 19

Editor's Note

Over the past four years as editor of the ANPC newsletter, I have seen several major changes in the way in which we view native plants in the province. Most are changes for the better, and reinforce the opinion that dissemination of information and education of the public lead to positive action in the protection and conservation of the environment around us. The realization that "Plants are Wildlife Too!" has also changed the context in which we view our green species and spaces.

The ANPC provides an ongoing link between the public and various issues involving native plants. Not only has its membership more than doubled in the last four years, but the Executive, and Committees have expanded in a parallel fashion to help meet the growing demand for more information. The public wants to know not only what's out there, but how they can get involved in protecting it. People are motivating themselves to take on stewardship programs, volunteer projects, letterwriting campaigns, and various forms of community activism.

It's exciting to see increasing involvement in projects to reclaim, restore, and renaturalize native habitat to urban environments, and to see the innovative and creative ways in which such projects are carried out. The salvage of prairie sod from developers so it can be recycled on damaged or disturbed sites, and the use of youth groups, schools or amateur naturalists to complete local inventories and planting programs are just two of the ways in which groups concerned about native plants are getting "more done for less".

There's a growing need for, and industry of marketable products and skills in all aspects of native plant conservation as well. The production of native species of plants for reclamation and restoration projects...consultantship skills in providing direction and advice on proposed developments...research into the production of native grasses...monitoring the Green Wave of plant growth across

...cont'd pg 3

New aspen computer program provides wealth of information

It's everything that you've ever wanted to know about aspen but didn't know who to ask - and the best part is that it's small enough to fit in the palm of your hand.

"It" is the new Aspen Management Information System developed by Richard Yang of the Canadian Forest Service, synthesized from over 7,000 pieces of published literature and organized in a user-friendly computer disk program. The system is a must-have for anyone associated with or interested in any biological aspect of trembling aspen.

"This is the 'Reader's Digest' version of everything you ever wanted to ask about aspen," says Dave Cheyne, Aspen Specialist with the Technology Development Unit of the Northern Forestry Centre in Edmonton. "It's an easy, accessible, and basically comprehensive guide to everything about trembling aspen - like an encyclopedia of biology at your fingertips."

The computer (information system) program, which is available in an IBM PC-compatible format, is the product of 2 years of work by stand productivity specialist Richard Yang...it is organized along 5 sections: characteristics, ecology, utilization, management and protection. As well, users can search the system using key words or subjects...and because it's hooked to a huge bibliography, all the author and title citations are there within each section, so everything's in one spot and if you want more details it's just a matter of finding a library."

The system will be useful across the Boreal forest region, including Quebec, Ontario, the prairie provinces, northeastern B.C., and the U.S. Lake States. (Cheyne) adds that the new system also benefits those doing aspen research, by determining what has already been studied in order to avoid duplication of work.

The...system requires 4 MB and hard drive to operate on at least a 386K IBM PC-compatible computer using a Windows environment. It can also be loaded into a laptop...

Editor's Note: For more information, contact Mr. Dave Cheyne, Northern Forestry Centre, at 435-7338/Fax 435-7359. A complete pkg. will cost about \$100.00.

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Reprinted from "Disappearing Mushrooms: Another Mass Extinction?" In: *Science* Vol. 254, p. 1458, 1992.

Fungal Extinctions Could Threaten the Survival of Forests

by Jeremy Cherfas

Recent evidence of dramatic declines in mushroom populations is of great concern to Eef Arnolds, a fungal ecologist at the Agricultural University of the Netherlands, and other mycologists around the world. The mass extinction of fungal species, which scientists believe they are now witnessing, could threaten the growth and survival of trees and the normal functioning of natural forest ecosystems.

For over 80 years the diversity and abundance of mushrooms in Europe have been carefully monitored. Over the past 20 years Arnolds has observed serious reductions in species diversity, as well as the number of individual mushrooms and their size. In fact, matched surveys found an average of 71 species per outing before 1954 while only 39 per comparable outing were found from 1973 to 1982. In a controlled field study, Arnolds found a decline from 37 to 12 species per 0.1 hectare plot over the past 20 years. In other European countries, experts are finding similar declines.

Aside from a general concern for loss of biodiversity, scientists are worried about secondary effects of these extinctions. Most of the fungal species in question are those that form symbiotic relationships with trees. The fungi aid the tree with uptake of water and nutrients; in return, they receive energy in the form of carbohydrates. Trees without these fungi grow more slowly and are at much greater risk for damage or death due to environmental stress or disease.

Researchers feel that the decline of the fungi is linked to air pollution, most likely high levels of nitrogen, sulphur and ozone. It remains to be seen whether the atmospheric pollutants damage the trees, thus inhibiting their ability to form the association with the fungi, or whether the fungi are damaged directly. Regardless, the healthy function of forest ecosystems across Europe could become impaired. Indeed, some observations, in areas now displaying severe forest decline, suggest that fungi began their downslope before the trees.

John Jaenike, an ecologist at the University of Rochester is concerned that similar fungal extinctions may be occurring in North America. This is difficult to document, however, because of poor historical records of fungal populations and the fact that many fungal species in N. A. are still undescribed. It is estimated that the boreal forests of N.A. are home to over 5,000 species of fungi along with relatively few tree species. The critical ecological role of these fungi means that their downfall could spell disaster for entire forest ecosystems. N. American scientists are hoping to begin an intensive fungal monitoring program soon that should provide some insight into the magnitude of any decline here. What to do about the decline, if it's verified, is a more complex problem.

Excerpts reprinted from: Branching Out, November 1993, Issue 1 (a publication of the Regional Development Div., Canadian Forest Service, Northern Forestry Centre, 5320 - 122 St., Edmonton, Alta. T6H 3S5)

ANPC 1993 Executive & Committee Heads

President: *Elisabeth Beaubien* (Research Associate, University of Alberta, Devonian Botanic Garden, Edmonton)

Vice-Chairman: *Dana Bush* (Botanist, Consultant, Edmonton)

Secretary: *Lorna Allen* (Biologist, Natural and Protected Areas, Alberta Forestry, Lands and Wildlife)

Treasurer: *Joyce Gould* (Biologist, Natural and Protected Areas, Alberta Forestry, Lands and Wildlife)

Northern Director: *Dr. Joan Snyder* (Professor, Grande Prairie Regional College)

Central Director: *Mike McNaughton* (Naturalist, Red Deer)

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

Director (Federation of Alberta Naturalists' representative): *Derek Johnson* (Canadian Forestry Service, Edmonton)

Conservation Action Committee: *Dr. Peter Achuff* (Plant Ecologist, Consultant)

Education & Information Committee

Northern Chairman: *Dan MacIsaac* (Canadian Forestry Service, Edmonton)

Southern Chairman: *Jim Posey* (Naturalist, Calgary)

Rare Plants Committee

Northern Chairman: *Derek Johnson*

Southern Chairman: *Bonnie Smith* (Botanist, University of Calgary)

Rare Plants Project: *Linda Kershaw*, (Botanist, Edmonton)

Reclamation/Horticulture Committee:

Carole Calenso-Fair (Horticulturist, Olds College)

Newsletter Editor: *Joan Williams*

(Biologist, Consultant, Calgary)

Publisher: *Carole Calenso-Fair*

the province . . . studies of riparian systems . . . natural area inventories . . . identification and prioritization of rare or significant species . . . the list goes on.

Much is starting to happen, but much more still needs to be done. The ANPC needs your support at its annual workshops (don't forget February 26th!!), and in volunteering with one of its committees, or special projects. If you sight rare species of plants in your summer meanderings, come across interesting articles that you think the membership might be interested in, hear about issues of importance to the ANPC, or just want to speak your mind (about native plants!), please contact the Editor. Don't forget, IRIS is your forum.

The ANPC provides input and assistance to many organizations and committees at local through to provincial levels, and along with the newsletter, also produces an annual seed source suppliers list, and summer field trip offerings throughout the province to explore natural wildlands. Much of the work on these and other projects are carried out by the dedicated Executive and Committee Chairs, so I think its time to say a big thank-you to all those who coordinate and participate actively in the ANPC. It's also time to say adieu, and pass the Editorship on to the very capable hands of Carole Calenso-Fair, former Reclamation and Horticulture chairman, and publisher of IRIS. Like good whiskey, I know that IRIS will only get better through time!

Joan Williams

To make comments, or request membership information, please write to: *The Editor, Alberta Native Plant Council, Garneau P.O. Box 52099, Edmonton, Alberta T6G 2T5.*

Publications, Articles

Bell, P.R. 1992. *Green plants: their origin and diversity*. Dioscorides Press, 315 pp. [\$24.95 paperback]

Brooks, R.R. & D. Johannes. 1990. *Phytoarchaeology*. Dioscorides Press, 268 pp. [\$39.95 hardcover]

Capon, B. 1990. *Botany for gardeners: an introduction and guide*. Timber Press, 220 pp. [\$17.95 paperback]

Cheskey, E.D. 1993. *Habitat restoration: a guide for proactive schools*. Waterloo County Board of Education, 51 Ardelt Avenue, Box 68, Kitchener, Ontario N2G 3X5. 90 pp. [\$25 Cdn.]

Dressler, R.L. 1993. *Phylogeny and classification of the orchid family*. Dioscorides Press, 330 pp. [\$49.95 hardcover]

Gray, A. 1950 (reprinted 1987). *Gray's manual of botany*. 8th ed. largely written and expanded by M.L. Fernald. Dioscorides Press, 1632 pp. [\$59.95 hardcover]

Hitchon, R. 1993. *Southland Natural Park preliminary vascular plant study 1993*. Pica 13(4): 25-32.

Imes, R. 1992. *Wildflowers: how to identify flowers in the wild and how to grow them in your garden*. Key Porter Books. [\$21.95]

Johnson, J.D. 1993. *A range extension for Mountain Gentian (Gentiana calycola Griseb.)*. Alberta Naturalist 23 (4): 15-16.

Kartesz, J.T. 1994. *A synonymized checklist of the vascular flora of the United States, Canada, and Greenland. Vol I - Checklist/Vol II - Thesaurus*. Timber Press, 684 pp. [\$149.95 hardcover]

McJannet, C., Argus, G., Edlund, S. and J. Cayouette. 1993. *Rare vascular plants in the Canadian arctic*. Can. Rare Plants Project, Can. Mus. of Nature, Ottawa, 79 pp. [\$14.92 incl. postage, handling and GST]. To order, call 1-800-263-4433.

Prance, G.T. & A.E. Prance. 1993. *Bark: The formation, characteristics, and uses of bark around the world*. Timber Press, 176 pp. [\$49.95 hardcover]

Provincial Museum of Alberta. 1993. *Third Prairie Conservation and Endangered Species Workshop Proceedings*. Nat. Hist. Occ. Paper No. 19. 384 pp. Order from Dan Chranowski, Manitoba Wildlife Branch, 1129, Queens Ave. Brandon, Man. T7A 1L9. [\$15.00 cheque payable to CWS Manitoba Branch]

Schafer, C. 1990. *Nature reserves: Island theory and conservation practice*. Smithsonian Institution. 190 pp. [\$16 U.S.]

Schofield, W. 1993. *Discovering mosses and liverworts in British Columbia*. Wildflower 9(4): 32-34.

Scotter, G. 1993. *White Birch (Betula papyrifera) from southeastern Alberta*. Alberta Naturalist 23 (4): 7.

Smith, D.R. 1993. *Occurrence of Slender-leaved Sundew (Drosera linearis Goldie)*. Alberta Naturalist 23 (4): 13.

Young, J.A. & C. G. Young. 1992. *Seeds of woody plants in North America*. Dioscorides Press, 418 pp. [\$49.95 hardcover]

To order copies of the following newly released reports from Alberta Water Resources Commission, contact Dr. Alfred Birch, Exec. Director or Mr. J. Lilley, Research Director, Alberta Water Resources Commission at 422-4232 (Edmonton):

- Alberta's peatlands and non-settled area wetlands; a background report

- Beyond prairie potholes: a draft policy for managing Alberta's peatlands and non-settled area wetlands.

- Wetland management in the settled area of Alberta: an interim policy

1993 Member Surveys

- You Could Be a Winner!

If you haven't had a chance to complete the 1993 ANPC Member Survey that was sent out with the last newsletter, now is the time to take a few minutes and do so. You can deliver your copy in person to the Annual Workshop and AGM in Edmonton February 26th, or you can mail it to *Kathleen Wilkinson, 68 Lake Wasa Green S.E., Calgary, Alberta T2J 3N6* by March 5, 1994 (postmark date). Members who submit a completed survey, and provide their name, address and phone number on it, will be eligible for a **prize draw** to take place the second week of March. Good luck!

Workshops, Courses

February 17-18: *Xeriscaping - Landscaping for the Future*. Xeriscaping combines landscape design, plant selection, practical turf areas, soil conditioning, mulches, and efficient irrigation to produce an attractive, low input, low maintenance landscape. Experts from across the Prairies will discuss the practical application of Xeriscapes principles for reducing water use and landscape maintenance. Hosted by Applied Sciences, Faculty of Extension, Univ. of Alberta, 93 University Campus NW, Edmonton T6G 2T4. To register call 492-3035/Fax 492-1216. \$195 (incl. proceedings).

June 26-July 1: *Canadian Botanical Association (CBA/ABC) Conference 1994*. Five symposia and 3 workshops on botanical issues, from conservation and management to writing scientific papers, using GIS for research, and biosystematic and molecular techniques. Posters, displays, field trips on pre- and post-conference days, banquet and western BBQ. Hosted by the University of Calgary. [Registration deadline is May 15: \$130 before May 26th; \$150 after May 26th; \$70 students; \$35 additional guests]. For details, see the full-page ad in this issue of IRIS.

May-August: The *Inglewood Bird Sanctuary*, Calgary is offering summer programs on Wildflower Identification, Spring Wildflowers, Rocky Mountain Wildflowers, and Mushroom Identification, plus other nature hikes. Classroom and field study. Courses cost from \$55 to \$265 + GST. For more information, call 269-6688. To register, call 268-3800.

May-August: The *Calgary Field Naturalists' Society Botany Study Group* offers weekend outings and weeknight trips to a wide variety of habitats and locations in Alberta, led by expert and naturalist guides. All trips are free. Trip dates will be included in the next IRIS Summer Field Trip Update from ANPC coming out in March-April.

August 4-7, 1994: *A Journey from Forest to Sea: the 23rd Canadian Nature Federation Annual Conference*. Pre- and post-conference tours, day trips, birding and other natural history walks, lectures, exhibits, etc. At Mount St. Vincent University, Halifax, Nova Scotia. To register, call (902) 861-1607, or write to Peter Payzant, CNF Conference Registrar, P.O. Box 2, Waverley,

IRIS is published three to four times yearly by the Alberta Native Plant Council. Subscription is included in membership to the ANPC. 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.

Membership fees are:

\$ 15	Individual
\$ 25	Family
\$ 10	Student
\$ 10	Retired
\$ 50	Corporate
\$ 500	Lifetime

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

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The Alberta Native Plant Council

PRESENTS

Reclamation and Revegetation: Towards Restoring Ecosystems



▶ WHEN AND WHERE:

Saturday, February 26, 1994

8:00 a.m. registration

8:30 - 4:30 p.m. workshop

Annual General Meeting to follow

▶ University of Alberta,

Earth Sciences Building,

Room 327

Edmonton (see map over)

▶ FEATURING:

- John Morgan of Manitoba (Canada's largest producer of tallgrass prairie plants) discusses successful native plant production
- Don Gayton, B.C. ecologist and author of *The Wheatgrass Mechanism*, debates preservation vs exploitation: the ethics of reclamation with native plants
- Ken May, Agriculture and Agri-Food Canada: Genetic diversity in native grasses
- Ann Sorech, a consultant, discusses plant materials: present and future
- Perry Griz, Ducks Unlimited, speaks on "Botanical Bullies" (weeds): Ongoing management
- Anne Naeth, University of Alberta: Reclamation in Alberta
- Barry Cole and Heather Gerling, Public Lands, Alberta Agriculture, Food and Rural Development: "Sprigging" at Ramsay

▶ ADDED ENTERTAINMENT:

- Contests: - plant identification
- name the fictional plant (artists: please submit drawings by Feb. 11th)
- Silent auction: proceeds for a Cardinal Divide reclamation project; donations welcome

▶ REGISTRATION:

(see attached form)

Register Now... only 200 seats available !!!

(lunch included, bring your mug)



- For more information: contact (evenings)
Ann Sorech, 461-5950 or Donna Lawrence, (430-9645)
Posters or exhibits welcome: contact Dana Bush, 430-0457
Alberta Native Plant Council, Box 52099, Garneau P.O.
Edmonton, Alberta T6G 2T5

▶ THANKS TO THE FOLLOWING SPONSORS!

- Alberta Agriculture, Food and Rural Development
- Alberta Environmental Centre
- Ducks Unlimited
- Nova Corporation of Alberta
- Soil and Water Conservation Society (Alberta Chapter)
- Society for Range Management
- Transalta Utilities
- University of Alberta: Organization of Botany Students

Alberta
AGRICULTURE, FOOD AND
RURAL DEVELOPMENT

▶ REGISTRATION

Yes, I want to pre-register for the Workshop!

Registration Fee: \$20 before February 11 _____
\$25 after February 11 _____

Yes I want to renew my membership to ANPC:

Individual/\$15 _____ Family/\$25 _____ Student/\$10 _____
Retired/\$10 _____ Corporate/\$50 _____

I have enclosed a cheque payable to ANPC for \$ _____ for _____ registrations and _____ membership(s)

Name: _____ Organization: _____

Address: _____

Phone: home _____ work _____ FAX _____

Send to: ANPC, Box 52099, Garneau P.O. Edmonton T6G 2T5

CANADIAN BOTANICAL ASSOCIATION

MEETINGS - CALGARY 1994

The 1994 annual meeting of CBA/ABC will be held in Calgary, June 26 to 30th, at The University of Calgary. The organizing committee is looking forward to extending our western hospitality to the members of the organization and all other participants. A number of social and extracurricular events are planned with the workshops and presentations to make the meetings enjoyable and productive.

In addition to contributed papers and posters, there are five symposia and three workshops scheduled. The symposia are: **Biological Conservation and Ecosystem Management, Proximate and Ultimate Aspects of Plant Reproduction, Biosystematic and Molecular Techniques, Fungal-Plant Interactions, and Hormones, Plant Growth and Development**. The three workshops are: **Ecology and Systematics Software, GIS for Systematic and Phytogeographical Research and Writing and Editing Scientific Papers and Technical Reports**.

Dr. Maurice Moloney of The University of Calgary will be giving a special inaugural lecture on **Molecular Biology in Plant Research** and a noted mycologist, Dr. Robert Danielson, also of Calgary, will be presenting the annual Weresub lecture on **Fungal Symbiosis with Trees**.

A western style barbecue will be held on Tuesday evening, June 28th, at the Rafter Six Ranch in the Rocky Mountains, west of Calgary. The annual special banquet honouring Dr. Taylor A. Steeves, University of Saskatchewan, and with local entertainment, will be on Wednesday evening, June 29th.

We also have an exciting package of field trips planned. Preconference day trips include the Landscape Ecology of the Kananaskis Valley, and an excursion to the Royal Tyrrell Museum of Palaeontology and the Badlands in the vicinity of Drumheller, Alberta. Post Conference trips include a day tour of the Bow River corridor with a look at the geology and natural history of the area, a trip above timber line on Plateau Mountain in the front range of the Rockies, and a day and a half trip to the southern Alberta grasslands. There are half day trips planned to the Head Smashed-In Buffalo Jump and Museum in Southern Alberta and to Many Springs, near Calgary, to look at native orchids.

The registration package will be mailed in January, only to the members of the CBA/ABC and the deadline for registration is May 15, 1994. For information on any aspect of the annual meeting, please contact CBA/ABC Vice-President:

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