THE CANADIAN BOTANICAL ASSOCIATION

BULLETIN

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Editor / Éditeur:
J. F. (Joe) Gerrath
Guelph

ON THE INSIDE
À L'INTÉRIEUR

EDITOR'S COMMENTS
COMMENTAIRE DE LA PART DE L'ÉDITEUR

Another Annual Meeting is history and, although there were only about 100 participants, the meeting had a good representation of excellent student papers and posters. I was pleased to see that so many members from the western provinces made the long trek to Charlottetown. I have heard good reviews by those who went on the field trips which the local committe had arranged and I am certain that everyone greatly enjoyed the lobster dinner. Jim Kemp, Christian Lacroix and the army of local students who made things run smoothly are to be congratulated on a well-organized, enjoyable meeting.

Although I realize that many islanders cringe at the hordes of tourists who come to the island for the "Lucy Maud" industry, I must say that Jean and I enjoyed our short visit to the "Anne" circuit. We were also very impressed by the progress being made on constructing "the bridge".

Abegweit Award

This will be an unfamiliar prize for those who were not at the Annual Meeting. The local committee decided to arrange a judging committee for posters presented at the Annual Meeting and named the award after the Micmac name for Prince Edward Island, Abegweit, which means "cradled on the waves". The award winner is from UPEI (see p. 39).

New Editor?

The short answer is ... not yet. The Board of Directors has been unable to convince a person (or persons) to take over the production of the Bulletin. I have agreed to continue as Editor for one more year to allow a new Editor to be appointed. I would be happy to assist the new Editor by becoming a "columnist" who would continue to search for items for the Plant Press and write them up for those pages. Any volunteers?

Contributions of copy for the Bulletin from members seems to have dried up over the last few months. Please let me know about recent student theses and any other items that might be of interest to members.

Thank You ...

to all of those at the Annual Meeting who almost completely emptied the box of review books which I brought to the meeting. There should be a lot of good book reviews in upcoming issues of the Bulletin.

Congratulations ...

to CBA/ABC member, John Klironomos, who has taken up an appointment as Mycologist in the Department of Botany, University of Guelph. You may remember that the Mycology Section of CBA/ABC was active in urging Guelph to retain a Mycology position.

Finally ...

I would like to thank the local organizers at Charlottetown, who thoroughly embarrassed me by having a surprise day-after-my birthday celebration as part of the Banquet.

Joe Gerrath
Editor

Future Annual Meetings
Prochaines Réunions Annuelles

1997
Université de Montréal (Institut botanique)
(with/avec A.I.B.S.)
Early August/au début d'août

1998
University of Saskatchewan
Saskatoon, SK
Early July/au début de juillet

1999
St. Louis, Missouri
(with XVI International Botanical Congress)
August 1-7 août

2000
University of Western Ontario
London, ON

2001
Okanagan University College
Kelowna, B.C.

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REPORTS FROM THE ANNUAL MEETING - CHARLOTTETOWN

PRESIDENT'S REPORT - 1995-1996

Guelph 1995: Last year's meeting was a great success, thanks in large measure to the enthusiasm and hard work of Doug Larson and his team of helpers. Letters of thanks have been sent out to all those involved in the organization of the meeting.

Meeting with BSA/AIBS, Montréal, August 3-7, 1997. Organization of this meeting is progressing. It will be held at a congress centre in downtown Montréal. Participants can stay in a McGill student residence or at any of the downtown hotels.

Saskatoon, 1998. The University of Saskatchewan will host the 1998 CBA/ABC Annual Meeting, and Vipen Sawhney and Art Davis have already formed an organizing committee. The theme of the conference will be **Plants and Biotechnology**, recognizing that Saskatoon is a leading centre in the field, with a Plant Biotechnology Institute and a Research Park on campus.

XVI International Botanical Congress, St. Louis, August 1-7, 1999. I have no recent news on this meeting.

London, Ontario, 2000. Paul Cavers, Dianne Fahselt, Anwar Maun, Jim Traquair and Jim Phipps (chair of committe) have invited CBA/ABC to meet at the University of Western Ontario in the year 2000, probably within the usual June 20-25 time period. The current proposal is that CBA/ABC should meet solo, but I have urged the committee to explore the possibility of a joint meeting with another compatible society.

Kelowna, B.C., 2001. We have an invitation from Melanie Jones to meet at Okanagan University College in British Columbia in 2001.

Awards Committee: This year's committee consisted of four Directors and an additional member from a "related discipline" (Microbiology): C.C. Chinnappa, David Garbary, Usher Posluszny, Garry Ferroni, Keith Winterhalder (Chair). The Awards Committee was responsible for judging the Lawson, Elliott and Macoun awards. The Weresub Committee, chaired by Randy Currah, handled the Weresub Award, and the Rowe and Steeves awards were judged by committees from the relevant CBA/ABC sections.

John Macoun Travel Bursary. At the time of the published deadline, I had received only one application for the Macoun Bursary, although 14 students eventually entered the Lionel Cinq-Mars competition. I therefore contacted all contestants, telling them that the deadline had been extended, and invited them to apply for the Macoun award. There were eventually four applicants, and the Awards Committee recommended that each of them receive a Bursary.

Careers in Botany. As I mentioned last year, we occasionally receive requests for literature on Careers in Botany. Our existing pamphlet is considerably out of date, and I am still attempting to find a volunteer to take on the task of updating it.

Canada-Wide Science Fair. Once again CBA/ABC supported youth science by making its special award of $500 at the Canada-Wide Science Fair in North Bay, Ontario, where I chaired the judging team for our award. The winning exhibit, entitled "La culture *in vitro*", was presented in a very professional fashion by a pair of intermediate-level students from Québec. The award was presented by CBA/ABC member Dr. Peter Nosko of Nipissing University. When the full package arrives from the Youth Science Foundation, a summary of the exhibit will be available in the Bulletin.

Canadian Biodiversity: As well as being available on diskette, this extensive bibliography by Ernie Small and Jacques Cayouette, co-sponsored by CBA/ABC, can now be accessed on the World Wide Web at:
http://www.cciw.ca/eman-temp/scientists/botanists/intro.html

CBA/ABC Archives: In view of the uncertainty as to the fate of the CBA/ABC Archives, I have investigated the possibility of their being relocated in the new Laurentian University Archives, and Marthe Brown, the LU Archivist, has been very positive in her response. At the same time, I suggested that she contact Mr. Larry McNally of the Manuscript Division of the National Archives of Canada as to the "mobility" of the CBA/ABC archival material that is already in Ottawa. In a nutshell, Mr. McNally is unlikely to agree to the CBA/ABC Archives currently in Ottawa being relocated. Furthermore, the space problem that existed in 1989 is no longer so critical, and he is willing to continue to accept CBA/ABC archival material in a selective fashion.

I would therefore suggest that we find a CBA/ABC member, preferably one who is located in Ottawa, who would be willing to take over as Archivist. This person can interact with Mr. McNally, and work out terms of reference as to the type of selectiveness required.

Keith Winterhalder, President CBA/ABC

PAST-PRESIDENT'S REPORT (NOMINATING COMMITTEE)

This was a very busy year for the Nominations Committee. Suggestions for nominations came in from many individual members and I must thank all of them for providing us with an excellent slate of new executives.

We needed three new Directors. Four were nominated: Jane Young, John McNeill, Jerry Chmielewski and Liette Vasseur. Since one of our new Directors must reside west of the Ontario/Manitoba border, Jane Young (UNBC) has become a Director by acclamation. A vote was held to determine the

two other directors. The result is that Liette Vasseur and John McNeill will become Directors for the period 1996-1998.

We had one nomination for Secretary: Ron Dengler. Ron takes over as Secretary of CBA/ABC for a two year term. I thank Ron for taking on this important position and wish him the best. As we all know, he has big shoes to fill in succeeding Jean Gerrath, who has done a superb job as Secretary for two terms. I'm sure that everyone in CBA/ABC will join me in saying, **"Thank you very much, Jean".**

We realized early in May that this year we needed to look for a new President-Elect! Luckily we were able to get an excellent candidate at the last minute: Denis Barabé from the IRBV-Jardin botanique in Montréal. Again, I thank Denis for agreeing to allow his name to be put forward and I wish him all the best as new President-Elect of CBA/ABC.

I guess that's about it for me as a member of the executive of CBA/ABC. The last six years have been very rewarding and I must say that I'm delighted to see that we've come from a position of crisis and instability to a strong and growing organization that is able to tackle the many problems that still lie ahead of us. All the best and good luck in the future.

Usher Posluszny, Past-President CBA/ABC

TREASURER'S REPORT

The CBA/ABC membership at the time of this annual meeting comprises 188 Regular Members, 35 Retired Members, 46 Student Members and 3 Life Members. During the past year 25 new members have joined CBA/ABC [13 Regular and 12 Student].

NET WORTH REPORT - May 31, 1996

Bank and Cash Accounts:		
General cheqing	7,088.74	
Macoun savings	1,282.07	
Porsild savings	494.05	
Rowe savings	763.85	
Steeves savings	918.85	
Weresub savings	642.71	
Total Bank and Cash Accounts		11,190.27
Other Assets (Investments)		
General [GIC + 2 TDs]	48,644.02	
Macoun [4 GICs]	12,929.34	
Porsild [GIC]	2,678.61	
Rowe [GIC]	1,928.60	
Steeves [GIC]	1,714.31	
Weresub [2 GICs]	19,222.63	
Total Other Assets		87,117.51
Total Assets [Net Worth]		98,307.78

INCOME & EXPENSE REPORT - GENERAL ACCT.
June 1, 1995 - May 31, 1996

INCOME		
Development Committee Revenue	331,00	
Investment Income - GIC	1,450.00	
Membership Income	12,800.49	
Bulletin Advertisements	200.00	
Bulletin Subscriptions	325.00	
AGM Profit (Guelph)	5,429.05	
GST Refunds	111.48	
Membership List Release	100.00	
Weresub Term Deposit - cashed	19,279.52	
Transfer from Steeves savings	250.00	
TOTAL INCOME		40,276.54
EXPENSES		
Awards expenses		
Lawson	579,12	
Macoun	800.00	
Steeves	250.00	
Weresub	1,000.00	
Rowe (mailing costs)	37.16	
Plaques, Certificates	225.29	
Banquet Tickets (Guelph)	120.00	
YSF (Science Fair award)	1,000.00	
Bulletin Expenses		
Printing	1,693.94	
Postage	732.01	
Stationery, etc.	122.06	
Transfers to Award Accounts		
Macoun	585.00	
Porsild	353.96	
Rowe	655.80	
Steeves	855.00	
Weresub	226.02	
Treasurer's Expenses	495.03	
AGM Start-up (Charlottetown)	1,200.00	
Photo cards	296.00	
Receiver General - Canada	30.00	
Registration fee - Ontario	50.00	
Conservation Committee	13.11	
Bank Service Charges	66.00	
US Exchange Correction	14.42	
Publication - Canadian Biodiversity	983.94	
Re-investment - Weresub GIC	17,279.52	
New Term Deposit - General Acct.	15,000.00	
TOTAL EXPENSES		44,663.38
INCOME LESS EXPENSES		-4,386.84
BALANCE (June 1, 1995)		11,475.58
BALANCE (May 31, 1996)		7,088.74

Christian Lacroix, Treasurer CBA/ABC

SECRETARY'S REPORT

This year marks the end of my tenure as Secretary for the Association. On the whole I have enjoyed the experience, and I think I finally understand how CBA/ABC operates. I must thank my Department at the University of Northern Iowa for their clerical support, especially Jean Wellman, who retyped the entire CBA/ABC Policy Manual so that it is now available on diskette. Revising and updating the Policy Manual was my biggest undertaking this year. The flow of herb letters has finally subsided, and I received no enquiries about membership in the Association. I was pleased that I was forced to run an election of Directors, and trust that this signals a renewed interest by members in taking an active role in CBA/ABC. I am confident that when I hand over my responsibilities to the new Secretary, Ron Dengler, the Association will be well served over the next few years.

Jean Gerrath, Secretary CBA/ABC

EDITOR'S REPORT

Another four issues of the Bulletin have been completed, along with a supplement containing members addresses, sectional affiliation(s) and electronic contact information. The annual address supplement seems now to be an established publication which members look forward to receiving. I will be producing an updated version to be mailed with the October issue of the Bulletin. A By-Laws booklet is being prepared and will likely also be mailed with the October issue.

One problem that arose this past year was a change in mailing procedures at my University. The hassles involved (and delays in billing) were annoying, with the result that the Bulletin is now mailed by the "buy-em, stick-em" method (the I.U.T.S. in Ontario is still used for sending Bulletins to members at those institutions on the system).

I have received no inquiries from anyone contemplating taking over as editor next year. If I was really "hard-nosed" about this situation, the Bulletin would cease publication with the October 1996 issue. However, I have informed the executive of the Association of my willingness to continue to produce the Bulletin for another year if no successor can be appointed by the time of the Annual Meeting.

One of the neat things about being Bulletin Editor is that you can add to your report after returning from the Annual Meeting. I would like to thank all of those who button-holed me at the meeting to express their appreciation for what I have accomplished during the past 6 years with the Bulletin (Sheesh! Is it that long?). I also have received several appreciative e-mail messages. Obviously everyone thought I was "gonzo", but, as you have read above, you are stuck with me for another year. Maybe that will prod you into nominating someone to take over as Editor.

Joe Gerrath, CBA/ABC Bulletin Editor

CONSERVATION COMMITTEE REPORT

1. CBA/ABC received a request to forward a response concerning development at Belanger Bay, Manitoulin Island (Ont.). The chair contacted Mike Oldham at the Natural Heritage Information Centre to see if he had any information concerning the rarities at the site. He had not been to the site, but suggested talking to Dr. Morton (Univ. of Waterloo), and suggested a local naturalist to contact. Keith Winterhalder had been to the site so he agreed to take over contacting the people concerned.

2. Keith Winterhalder had contacted the office of the Ontario Ministry of Transportation concerning the Bradford Bypass (north of Toronto), and had requested a copy of the Environmental Assessment. The Ministry forwarded a response stating that the assessment had not been completed, but sent a proposal concerning the assessment from the engineers, McCormick Rankin. The chair at that time was working on a contract in the Maple District office of the Ontario Ministry of Natural Resources and she contacted the employee conducting the wetland evaluation for the area. His understanding was that the bypass would not go near the areas of concern and he had not heard any objections expressed by the public or local naturalists, as the area affected is already adjacent to heavy agricultural usage.

3. A request was received concerning a proposed peat extraction development for Baltic Bog, Prince Edward Island. Since the Island Nature Trust was the correspondent on most of the forwarded information, the chair contacted the Island Nature Trust to receive any additional information and correspondence concerning this bog. The bog has been assessed both by the Trust's biologists and a consultant. The result is that the development will not proceed.

4. Here is an update concerning the Canadian Museum of Nature site at Aylmer, Québec, over this past year. An inventory done at the site by staff of the Museum found that there were 3 plant species that are rare in Québec and 93 regionally significant plants, according to Gillet and White's *Checklist of Vascular Plants of the Ottawa-Hull Region, Canada.*

Despite a highly visible fight, which included the help of the Sierra Club, a short report in Maclean's magazine (Nov. 20, 1995), support from the Canadian Coalition for Biodiversity (including presenting their results to Ottawa and to the United Nations), as well as a CBA/ABC Bulletin editorial, the fight was lost!

The Department of Public Works and the Ministry of the Environment approved the site and, by the time Sheila Copps became Heritage Minister and decided to do her own review, she concluded that it was too late. This site contravened the federal wetlands policy and it was believed that this would force the halt of this project; however, the Museum administration continued to push on.

Hats off to *Frank* magazine in its description of the project. It is ironic that the Museum's own wetland poster declares:

> *"How do people hurt wetlands? By draining water and bulldozing them over ... If you think people are hurting wetlands you should do something ..... talk to your friends or parents, write to your newpaper or MP, con't be shy."* (*Frank*, March 1996)

Currently, construction continues with little compliance to the mitigation suggested and peat wastage has occurred at the site. The species on the site have been lost, and it is felt that this wetland has been lost. In a June 7 announcement, Dr. A. Emery has retired and the new President is Colin Eades. This is welcome news, as it was Dr. Emery who stated, concerning inventory of species and habitats, that "This can be done by people with specialized but minimal training (parataxonomists)" [in a column called *The Last Word* in the Museum publication, *Biodiversity*]. It is too late for this wetland, but perhaps the Museum administration should be made to understand that it has participated in the largest federal case of environmental hypocrisy foisted on the public this year. All correspondence concerning this (the poor behaviour of the Museum) should be addressed to the new President, Colin Eades, with copies going to the new Chairman of the Board, Frank Ling.

A further suggestion that has come from the Museum is that the CBA/ABC draft some guideline to the effect that Environmental Assessors or Companies should be registered.

Heather Stewart, Chair
CBA/ABC Conservation Committee

Editor's Note: *Because of her busy consultant schedule and the possibility of conflict of interest arising, the Chair wishes to resign her position. At the meeting of the incoming executive in PEI, the Board expressed its appreciation for all that Heather Stewart has done on behalf of the Association. It was decided that the responsibility for this onerous position be divided between two members, one from the west and one from the east. The names of the new Conservation Committee co-chairs will be printed in the next issue of the Bulletin.*

CANADIAN JOURNAL OF BOTANY EDITOR'S REPORT - June 1996

CJB had another busy year during which:

✿The Ottawa office has consistently achieved publication in the cover month.

✿The Proceedings of the 5th International Mycological Congress were published, albeit 4 months late, but the final product has been well received and is being widely cited.

✿The first "Medal" review article, by 1995 winner of the CBA George Lawson Medal, Dr. Ernest Small ("Adaptations to herbivory in alfalfa". *Can. J. Bot.* 74: 807-822, June 1996) was published.

✿The Commentary section has attracted several submissions. These are edited for clarity, but they are opinions and are not therefore subject to peer review. Ann Oaks' review article attracted attention. The debate over whether cell walls are really part of plant cells, which began in *The Plant Cell,* continues in a CJB Commentary to be published shortly.

✿Acceptance rate was 54%. The positive decision time (review + revision) rose to 137 days (from 133) for English papers and was steady at 153 days for French papers.

✿Average publication time has plateaued at approx. 10 months. I am still convinced that publication time must be dropped to 6 months if a paper journal is to survive.

✿Monthly contents for *Can. J. Bot.* are published electronically. Details are at:

http://www.cisti.nrc.ca/journals/tocbot.html

✿Time in press (between acceptance and publication) is back down at 149 days after a slip to 161 days in 1994. French production improved dramatically from 224 to 164 days.

✿There were 458 submissions in 1995 (465 in 1994). We seem to be steady at this level. The increasingly interdisciplinary nature of all submissions makes assignment to expert editors very difficult. I thank all members of the Board for their willingness to spread their own wings as they are asked to deal with increasingly cross-disciplinary submissions.

We continue to publish symposia, but such contributions must be peer-reviewed for intellectual novelty. All review and research papers must not have been previously published in any form (peer-reviewed or not) longer than a conference Abstract. The war against "salami" science continues. It is important for consultant reviewers to tell us when they think they see a problem. Two allegations of questionable ethics were resolved. Both were clearly the result of naiveté on the part of the authors. As with almost all Journals, our biggest ethical headache is the slow peer-reviewer. We are all busier than ever, but the obligation to provide timely reviews remains. We prefer you, the reviewer, to say "No" rather than agreeing to do a review and then delaying. The "black-list" is very short. Most of you step far beyond the call of duty and you do a fine job.

I continue to receive unsolicited comments that *Can. J. Bot.* is held in high esteem. You, the Canadian botanical community, give generously to the Journal's reputation by your rigor as reviewers. Most reviews come from Canada. The scientific community could not survive without your free labor. It is a pleasure to thank you all for your efforts.

There have been several changes in the Editorial Board since I last reported to you. Associate Editors have a 3-year term. They work enormously hard and well beyond the call of duty. Anwar Maun and Ellen MacDonald have taken some leave, Suzanne Warwick joined the Board, and Norm Kenkel and Jean Gerrath have retired this year.

There was a workshop offering called *"Pre-submission review of papers"* at the 1996 CBA meeting in PEI. Papers

which have been pre-reviewed and pre-edited undoubtedly have a smoother passage. I wish that more research supervisors would put their papers out for such scrutiny.

The issue of authorship is of growing concern. I urge all authors, especially those who are offered "ghost" or "gift" authorship, to check the basic criterion - ***Can you take public responsibility for the information and ideas in the paper?***

There are increasing concerns about "ownership" of data. Given that patents allocate ownership, perhaps it is better for us to think about "right of access" to data.

I would like to thank all Board members, but special thanks to Bernard Baum and Dick Pharis, who were on Michael Shaw's editorial board, and Larry Peterson and Brian Colman, who began with Taylor Steeves. They and the whole Board have enormous commitment and seemingly endless energy in the service of their colleagues.

Respectfully submitted,
Iain E.P. Taylor, Editor, Can. J. Bot.

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AWARDS AT CHARLOTTETOWN

The following is a list of the CBA/ABC Awards presented at the Annual Meeting in Charlottetown. Award citations and further details will be printed in the October Bulletin.

LAWSON MEDAL

Margaret McCully
Carleton University

MARY E. ELLIOTT AWARD

Joe Gerrath
University of Guelph

LUELLA K. WERESUB AWARD

Gavin Kernaghan
University of Alberta

J.S. ROWE AWARD

Maciej Biernacki
University of Windsor

Honorable Mention
Wayne C. Bessie
University of Calgary

TAYLOR A. STEEVES AWARD

Mark D. Wilkinson
University of B.C.

MACOUN TRAVEL BURSARIES

Madhur Anand
Dept. of Plant Sciences
University of Western Ontario

Andrea Corbett
Dept. of Botany & Plant Ecology
Michigan State University

Ron Deckert
Dept. of Botany
University of Guelph

Michelle Woodvine
Dept. of Botany
University of Toronto

LIONEL CINQ-MARS AWARD

F.L. Thompson
Dept.of Biology
Memorial University of Newfoundland

Honorable Mentions
Madhur Anand
Dept. of Plant Sciences
University of Western Ontario

Nocha Van Thielen
Dept. of Biology
St. Francis Xavier University

ABEGWEIT AWARD (BEST POSTER)

Mark Grimmet
University of P.E.I.

❖ ❖ ❖ ❖ ❖

Poorly Known Economic Plants of Canada - 10. Bearberry, *Arctostaphylos uva-ursi* (L.) Spreng.

E. Small and P.M. Catling, Eastern Cereal and Oilseed Research Centre, Agriculture and Agri-food Canada, Saunders Bldg., Central Experimental Farm, Ottawa, ON K1A 0C6

Common Names: Bearberry, common bearberry. French: Raisin-d'ours, Raisin dours commun.

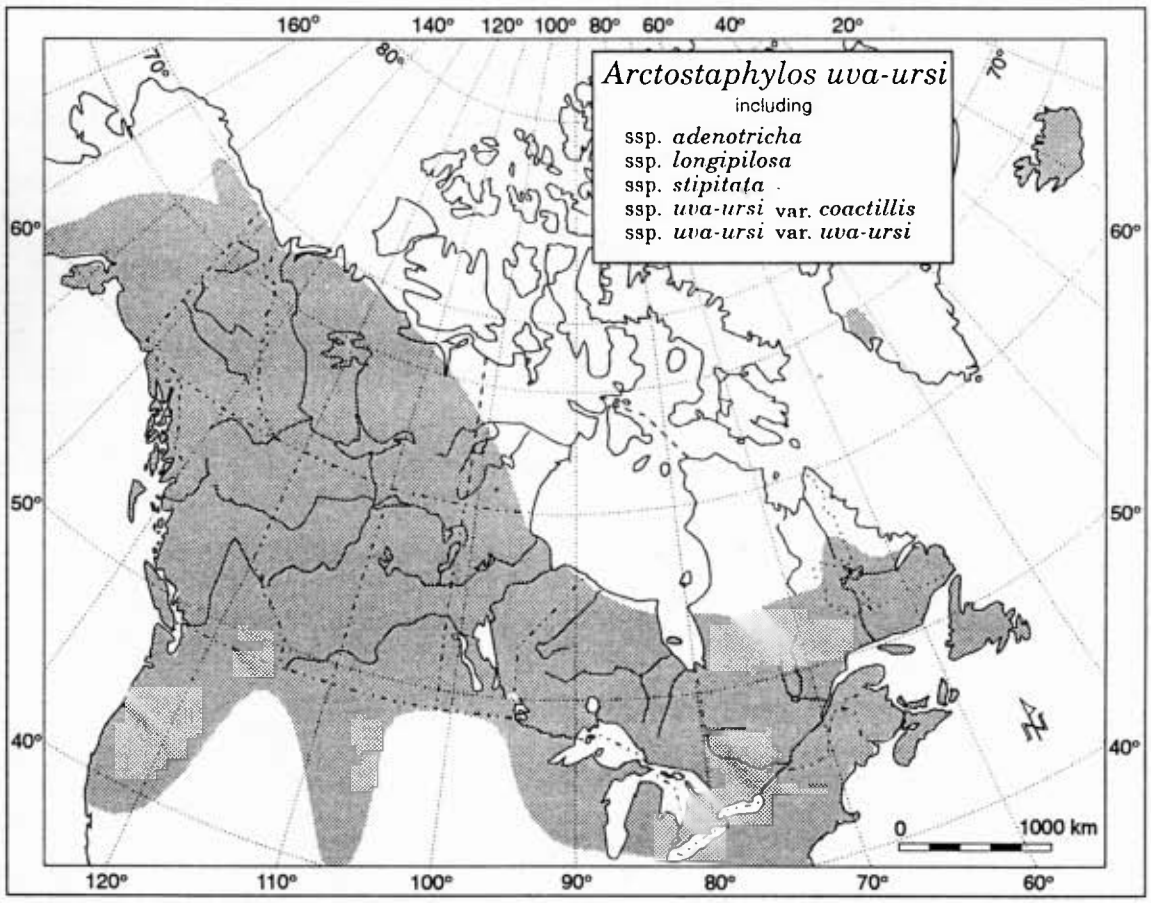
Notes: *Arctostaphylos* is Greek for bear's bunch of grapes, while *uva-ursi* is Latin for bear's grape, as is the French Raisin d'ours. Cascara sagrada (from *Rhamnus purshiana*), a chief constituent of laxatives, is also sometimes called bearberry, but is a deciduous tree.

The bearberry treated here is a prostrate evergreen shrub which creeps over the ground and can reach several metres in length, although the upright branches rarely attain heights of more than 20 cm. Papery bark characteristically peels off the older reddish-brown or gray branches. The oval leaves (1-3 cm long) long are firm and leathery. Small (6 mm long) white or pink, bell-shaped flowers in small clusters (3-15 flowers) are produced in the spring, and pollinated by bumblebees. Red berry-like drupes 6-10 mm in diameter, with dry insipid pulp and usually five seeds, ripen in the autumn (the time depending on location and altitude) and persist on the plant through the winter. Animals and gravity disperse the seeds. This species regenerates primarily vegetatively. Bearberry occupies a wide range of soil textures and soil pH, but is especially common on dry, nutrient-poor soils with limited clay and silt. It is a shade-intolerant species, growing best in open situations where it forms a compact mat. Fires may help to maintain optimal habitats. The plants regenerate rapidly from dormant buds after fires if the crown has not been killed, and the seeds may be fire resistant.

Bearberry is a widely distributed circumpolar boreal species, especially common in Canada and the northern U.S., but also found across Eurasia. In North America it is encountered from the northern half of California north to Alaska, across Canada and the northern U.S. to new England and Newfoundland. It ranges south in the Rocky Mountains to New Mexico in the west, and in the east extends south along the Atlantic Coast to New Jersey, and in the Appalachian Mountains to Virginia. Rare, disjunct populations are known in Georgia. The species occurs in open, dry habitats including shorelines, dunes, rocky barrens and slopes, sandy barrens and prairies. Bearberry is frequently dominant on beaches, dunes and mountains, and may play a major role in preventing erosion. This hardy plant is found across most of Canada but is localized in many areas, such as southwestern Ontario, where natural open habitats are limited.

In both Europe and North America bearberry has long been considered taxonomically difficult. The most recent authoritative taxonomic analysis of bearberry in Canada, by J.G. Packer and K.E. Denford, recognized four taxa (ssp. *uva-ursi* var. *uva-ursi*, ssp. *uva-ursi* var. *coactilis*, ssp. *longipilosa*, and ssp. *stipitata*). Most of these occur throughout the Canadian range, the exception being ssp. *stipitata* which is exclusively western. The species does appear to be quite plastic, developing differently depending on habitat, but additionally there is ecotypic variation. Variation in the Rocky mountains is especially extensive.

In the Old World, medical use of bearberries was appreciated as far back as the early Romans. Bearberry was also widely used by Indigenous Peoples of North America for various medicinal purposes. One of its obsolete names, :mountain tobacco,: reflects its very common use in smoking mixtures. Early settlers used it to treat kidney stones and other diseases of the urinary system. The berries are usable as an emergency food, and were once stewed with venison by the Ojibwa, while other Native North Americans fried them or dried them for use in pemican. Today, the fruit still finds use, in jelly, jam, and sauces.



True to their name, the berries of bearberry are relished by both black and grizzly bears, in the autumn, but especially in the early spring when they may be critical to survival. Although the fruits are of low quality, persistence through the winter makes them an invaluable food. The berries are also eaten by a variety of other wildlife, including small mammals, bighorn sheep, mountain goat, deer, elk, songbirds, and gamebirds (including grouse and wild turkey). Hummingbirds have been observed taking nectar from the flowers. However, cattle and other domestic stock avoid bearberry. Bearberry appears to be resistant to livestock trampling, and in some heavily grazed locations becomes dominant.

Two kinds of cultivars have been, and continue to be selected: ornamental cultivars which may have attractive habit, showy flowers, abundant fruit and glossy leaves, such as Vancouver Jade and Toms Point; and medicinal cultivars that produce high yields of arbutin, such as the non-flowering Arbuta, released in Czechoslovakia in 1981. Since it is the leaves not the fruits that are medicinally effective, the non-flowering 'Arbuta' is desirable as a medicinal crop as the plant is not diverting its energy into berry production. Medicine is obtained from both wild and cultivated plants. Generally ornamental cultivars can benefit from more fertilization than can medicinal cultivars. Because bearberry is useful for many purposes, its growth and propagation have been studied in detail and trials have been conducted on mechanized harvesting. In the wild, good seed crops may be periodic, occurring only once in 5 years. Establishing seedlings is relatively difficult, although commercial seed is available. Taking stem cuttings in the fall is considered the best method of propagation. The roots usually form ectendomycorrhizae, although cuttings may be inoculated with endomycorrhizal fungi before rooting.

In North America bearberry is primarily cultivated to stabilize slopes prone to erosion and as an ornamental ground cover. The species is very useful as an attractive erosion control plant along highway embankments, especially on coarse-textured soils low in nutrients. It grows well on steep as well as gentle slopes. It also makes an excellent cover for sunny rock walls, rockeries, parking strips, and other urban niches. Bearberry tolerates low summer moisture, and some garden selections withstand salt spray or grow well in semishade. Fruiting branches are used as decorations, especially for Christmas.

Medicinal preparations of bearberry are made from the leaves, which are collected in the fall. The aqueous extract of the dried leaves has been designated by the pharmacological binomial :Uvae-ursi Folium,: and more commonly in the commercial pharmacological trade as "uva ursi." The drug preparation is used mostly as an anti-inflammatory disinfectant to counteract bacterial infections of the urinary tract. The main active chemical of interest is the phenolic glycoside arbutin (a hydroquinone, usually making up 5-12%, sometimes more than 15%, of the dry weight of the foliage). The leaves also contain the pharmacologically active monotropein (an iridoid), and numerous other constituents, including trace amounts of aspirin. The leaves contain large amounts of tannins, so much so that the plants were once commonly employed to tan leather, a use that persists to this day in Scandinavia. These tannins can cause nausea and other effects. Excessive use of bearberry can lead to stomach distress, vomiting, tinnitus (ringing in the ears) and eventually delirium, convulsions, collapse, and even death. These symptoms have been attributed specifically to arbutin. Bearberry has been used as a vasoconstrictor for the endometrium of the uterus. However, constricting the blood supply to the uterus may damage a foetus, and so bearberry should not be used during pregnancy.

Bearberry is the best known antibacterial herb for the treatment of such urinary tract infections as urethritis and cystitis (inflammation of the bladder). Use has decreased with the development of sulfa drugs and antibiotics. The herb is found in almost all of the teas marketed in Europe for treatment of kidney and bladder conditions. With rapid commercial growth of medicinal herbal products in North America, it is likely that bearberry will regain some of its importance. Over 50 commercial pharmacological products sold in Canada contain bearberry. The well known Richters herb catalogue offers dried leaves of bearberry at 25 g for $5.00, 1 kg for $67.00. Unlike several of the medicinal herbs featured in previous articles of this series, there is enough of a gap between the effective dose and the toxic or fatal dose that consumers who have joined the fashion of herbal self-medication are more likely to benefit than to suffer. The recommended dose (varies from 1 g, 3-6 times daily to about 10 g (1/3 oz.) daily, the latter approximating 400-700 mg of arbutin) has not been associated significantly with negative effects (bearberry should not be utilized for more than a few days).

Knowledge of the mechanism of action of bearberry is indispensable if medicinal benefits are to be realized. It is commonly claimed that bearberry is a diuretic, and indeed the triterpene derivative ursolic acid and the flavonoid pigment isoquercitrin promote urination, although not nearly to the extent of many other herbs. Astringent chemicals, such as the tannins, are well known to exert healing action on the body, but this too does not seem to be an important remedial mode for bearberry. Moreover, the very high concentrations of tannin (15-20%) tends to result in digestive disturbances. Since tannins are extracted with hot water, the normal method of tea preparation should not be followed. To minimize tannin content of the beverage to be consumed, it is best combined with cold water and allowed to stand 10-24 hours before drinking. Bearberry is effective only if the urine is alkaline. Arbutin from bearberry is hydrolysed in the intestinal tract to produce hydroquinone, resulting in an antibacterial effect in the urine if the pH is above 8. To develop alkaline urine, one can consume 6 to 8 g of sodium bicarbonate per day; or eat a diet rich in milk and non-acidic vegetables (such as potatoes), while avoiding acid-rich foods such as many fruits and their juices, sauerkraut and vitamin C. These requirements are an obvious hurdle to the use of bearberry. Consumption of bearberry at medicinally effective dosages results in green urine.

There appears to be increasing interest in Europe in cultivating bearberry for medicinal harvest, while in North America medicinal bearberry has been gathered from the wild. In some regions of Europe the supply of wild plants has been exhausted, suggesting potential profit in medicinal bearberry cultivation in North America.

BOOK REVIEWS

Terrestrial Orchids - from Seed to Mycotrophic Plant. by Hanne N. Rasmussen. 1995. Cambridge University Press, Cambridge. Price: $US 64.95.

This book brings together a vast amount of both old and recent literature on terrestrial orchid seeds, development of protocorms and seedling establishment. The importance of mycorrhizal fungi in relation to seed germination and seedling establishment is critically assessed and the author includes many new personal observations on this topic. The author should be commended for the effort made to include literature published in many languages and obscure journals.

The book is divided into 13 chapters and two appendices, the latter containing useful information on culture media and nomenclature of orchid and fungal species. The first four chapters deal with the characteristics of seeds, seed development, seed survival and requirements for seed germination of terrestrial orchids. Overall this is an excellent review of the current status of these topics. Chapter 5 considers the difficulties in isolating and identifying the fungal endophytes of protocorms and roots, the characteristics of these fungi and the roles they play in seed germination and protocorm establishment. Particularly useful is the critical discussion of anamorph-teleomorph relationships and the confusion that exists in the literature concerning the identity of orchid endophytes. In this chapter and others the author mistakenly calls root hairs, 'rhizoids'. Chapter 6, germination processes, might have been better incorporated into the beginning of Chapter 4. Chapter 7 is a description of the variety of underground organs formed by terrestrial orchids. I found this chapter to be the least satisfactory of all the chapters, mainly because of the confusion in terminology: e.g. mycorhizome vs protocorm; exogenous origin or roots; tubers as modified roots; "sinker"; "dropper", etc. The author has tried to deal with the many terms but a critical evaluation of them is not included. Chapters 7 and 10, the latter dealing with life history and phenology, might have been integrated into one. The author has compiled the life histories for a number of genera and indicates the limited information available for early stages of seedling development.

Chapter 8 provides a very useful historical perspective on the association of orchids with mycorrhizal fungi and then describes the histological features of the association in protocorms and roots. This is generally a very good summary of the literature but again terminology is somewhat of a problem. For example, the root is referred to as possessing a 'bundle sheath', and the term 'ethioplasts' is used but not defined. The coverage of physiological factors involved with the mycotrophic habit is thorough. Chapter 9 treats the very complex interactions between abiotic factors and seedling growth and reviews a rather large body of literature on this topic. Chapter 11 is a brief consideration of propagation of terrestrial orchids and, as the author points out, this has not been an area of intense research, unlike the situation for tropical, epiphytic orchid species. Chapter 12, the effects of orchid mycorrhizas, should have perhaps followed Chapter 8 but on its own this is a very interestiing chapter dealing with the relationship between mycotrophy and ecological and evolutionary events. Chapter 13 summarizes the life history, fungal endophytes, culture methods, seedling growth and status of all north temperate orchid genera. This is an extremely valuable chapter for anyone working on any aspect of orchid biology.

Overall, this is an excellent reference book for anyone interested in orchids and is a must for researchers dealing with terrestrial orchids, particularly the events involved in seed germination and seedling establishment. I spent many pleasant hours reading this informative book and I recommend it very highly.

R. Larry Peterson, F.R.S.C.
Department of Botany, University of Guelph

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Urban ecology as the basis of urban planning. Edited by H. Sukopp, M. Numata and A. Huber. SPB Academic Publishing, The Hague, The Netherlands. Price US$ 47.00.8

Before reading this book I had the idea that urban ecosystems might be a bit more complex than natural ecosystems. I had to change my mind: the urban system is very complex, since species composition and abundance vary in space and time, and this is particularly true because of anthropogenic influences, i.e. how do you want to integrate human activities in actual community theories? According to Trepl (in the first paper of the book), many ideas used in natural system ecology may not be applicable to urban ecosystems because of human interference.

This book represents the contribution of several biologists from around the world under the supervision of three editors Sukopp, Numata and Huber. The work originates from oral papers presented during a symposium at the INTECOL Congress in Yokohama, Japan, in 1990. The manuscripts were submitted in 1992. The delay for publication of these papers was so long that some topics appeared old. From these basic studies, mostly on vegetation but also wildlife surveys, new notions are now presented at other meetings such as the Ecological Society of America, Utah 1995. Nevertheless, this book may be looked on as one of the first contributions in the field of urban ecology.

Most of the chapters in this book apply the concepts of phytosociology and biocoenoses to describe vegetation in different types of urban ecosystems such as cities and villages. The first chapter presents the general hypotheses that should be tested to develop new concepts in urban ecology. Although this first chapter is quite difficult to read (the style may need some improvement) and may discourage several people, Trepl efficiently exposes the hypotheses that should be tested in urban ecology in order to develop more solid concepts. Unfortunately, I am not convinced that most of the other papers are effectively doing so. Most are still based on general ecological theories or models such as community succession (e.g. facilitation model) and integration. Those ideas are slightly modified to take into consideration human interference and to make them more appealing.

The next nine chapters describe basic phytosociological data collected in different types of urban habitats such as cities and villages. Overall, the ideas remain similar: basic descriptions of the vegetation but unfortunately, few interpretations about urban planning. The last two chapters are quite interesting in that they integrate the concept of wildlife management in urban ecosystems for better urban planning. The last paper, especially, presents interesting ideas (advantages and disadvantages) on the roles/functions of wildlife in urban ecosystems. I believe that this last chapter represents the best contribution in this book and adds a positive final note about the role of urban ecology as the basis of urban planning.

Ecology can contribute a lot to urban planning. Since plants and animals are parts of the urban ecosystems, the old idea of only looking at human activities in urban planning has to be forgotten. Plants and animals are crucial in human welfare. Although this book has an enormous bank of data on vegetation and wildlife surveys in urban habitats, few concepts or generalisations are developed and fewer ideas are extrapolated for urban planning. This book represents a very good phytosociological survey of urban areas. I am however disappointed to seeing few theories applied to urban planning. Still, the lack of interpretation may also show how little is known about urban ecology and few generalisations are in fact developed.

I believe part of my disappointment also stems from the lack of straight forward analytical methods used in several of these papers. In the future new types of analyses must be developed for urban ecology or new more generalized studies are needed in order for urban ecology to become a full science as the basis of urban planning. From this book I can just conclude that more analytical approaches and data are necessary. It certainly represents a good starting point in urban ecology.

Liette Vasseur, Assistant Professor
Saint-Mary's University

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Compendium of Plant Disease and Decay Fungi in Canada 1960-1980. by J. Ginns, 1986, 416pp., softcover.

The author has a few copies of this publication available for distribution. If interested, contact:

J. Ginns
ECORC, Agriculture & Agri-Food Canada
Wm. Saunders Bldg. #49, Experimental Farm
Ottawa, ON K1A 0C6.
E-mail: ginnsj@em.agr.ca

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UNIVERSITY OF SASKATCHEWAN
DEPARTMENT OF BIOLOGY

The Department of Biology at the University of Saskatchewan invites applications for a tenure-track position at the Assistant Professor level. The position will be for a botanist working with lower plants or fungi: expertise with molecular techniques is desirable. The candidate will be expected to participate in teaching a second year survey course dealing wtih bacteria, algae and fungi, and develop a senior course in his or her specialty. The candidate should hold a Ph.D. and have postdoctoral or equivalent experience. This position will be available **January 1, 1997.**

Applicants should submit a letter of application, curriculum vitae and the names, addresses and telephone, fax or E-mail numbers of at least three referees, and a brief description of research interests and teaching capabilities to:

Dr. L.C. Fowke, Head
Department of Biology
University of Saskatchewan
Saskatoon, SK S7N 5E2
Telephone: (306) 966-4400, Fax: (306) 966-4461
E-mail: Larry.Fowke@usask.ca

The University of Saskatchewan is committed to principles of employment equity. Aboriginal candidates, the disabled, members of visible minorities, and women are especially encouraged to apply. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Application deadline is **August 31, 1996.**

UNIVERSITY OF TORONTO
PLANT DEVELOPMENT

The Botany Department of the University of Toronto invites applications for a tenure-track position in Plant Development at the Assistant Professor level, starting **July 1, 1997.** The successful candidate should have a Ph.D. and, preferably, post-doctoral experience. We are particularly interested in applicants using cellular, molecular and genetic approaches to studying problems in plant developmental biology. Teaching responsibilities will include participation in undergraduate and graduate courses in plant development and in cellular and molecular biology. The position is integral to a new campus-wide Graduate Program in Developmental Biology. Applicants should submit a curriculum vitae and a statement of research interests and arrange for three letters of reference to be sent to the address below by **September 16, 1996.**

Dr. Verna J. Higgins, Chair
Department of Botany
University of Toronto
25 Willcocks Street
Toronto, Ontario, Canada M5S 3B2
Email: higgins@botany.utoronto.ca

This position is subject to budget approval. In accordance with its Employment Equity Policy, the University of Toronto encourages applications from qualified women and men, members of visible minorities, aboriginal peoples and persons with disabilities.

The Plant Press / La Presse Botanique

These pages are intended as a chronicle of news items about plants (or about CBA/ABC members) appearing in newpapers or in the popular science magazines. Contributions from your local newspapers are invited. Send the editor a clipping, photocopy or simply a note about the item and don't forget to indicate the source and date.

Ces pages sont consacrées aux nouvelles concernant les plantes (ou certains membres de l'ABC/CBA) qui paraissent dans les journaux. Les contributions en français sont également encouragées. Faites parvenir vos soumissions au rédacteur en chef ou au rédacteur adjoint, section francophone, et n'oubliez pas d'indiquer la source de l'article et la date de publication.

Addenda to Previous Stories

A sharp-eyed member points out that the story of the 2,000 year-old tomato seeds found in China must have become screwed up before being published in the two Canadian newspapers cited as sources in the January 1996 column. Thanks to Paul Barclay, who wrote. "Tomatoes originated in the new world (South America) and were introduced into China after 1500 A.D. Also, all species of *Lycopersicum* are native to the new world. Are the Chinese pulling our legs, or is there some new information?" The Editor suspects that the newswire agencies fouled things up (perhaps the seeds were only 200 years old instead of 2000?).

Another story for which the Editor has been hoping to tie up loose ends is the one about the discovery of a new genus in the Araucariaceae in Australia (the Wollemi pine). The scientific name was to be published last year in *Telopea*, the journal of the New South Wales Botanical Garden (not one of your most widely distributed botanical journals). After much searching on the Web your editor finally struck paydirt. The new tree was given the name *Wollemia nobilis*.

β-Carotene not a Panacea

This is another story which carries on from a previous item in the Plant Press. Recent research in the U.S.A. and Finland on male smokers suggests that popping β-carotene pills really has no effect against cancer and heart disease (in fact, there may be slightly increased risk). These results seem to contradict the evidence found by the U.S. researchers that those participants that had the highest levels of β-carotene in their blood at the beginning of the study had low rates of cancer and heart disease, regardless of whether they were or were not given β-carotene pills. Researchers think that high β-carotene blood level may be only a marker indicating that the person has eaten a healthy diet containing many beneficial compounds.

Nigel Hawkes, The Times of London, Feb. 1, 1996

Bernard Rees Jones (1906-1996)

This British pharmacist, who died on January 25, will be unfamiliar to most North American plant lovers, except for those who shared his passion for sweet peas. Jones wrote "**The Complete Guide to Sweet Peas**" and the cultural bulletins of the National Sweet Pea Society (U.K.). Between 1953 and 1979 he won the NSPS's Clay Cup 9 times. He also bred several new varieties and worked at improving modern Spencer varieties by breeding in the perfume found in older varieties.

The Times of London, Feb. 6, 1996

Recreating a Species

Helianthus anomalus [the anomalous sunflower], which is found on sand dunes of the Great Basin desert, is a natural hybrid of *H. annuus* [common sunflower] and *H. petiolaris* [petioled sunflower]. The hybrid is distinguished from the parents by having fewer, shorter and broader marginal petals, long hairy bracts on the inflorescence and a short petiole on the leaf. It is thought to be about 100,000 years old as a species. A recent paper in *Science* reports on experiments with artificially created hybrids which would mimic the natural hybrid. The lab hybrids were bred into three separate lineages by crossing either with other hybrids or with one of the parental species. After four generations the researchers mapped the genomes using many RAPD markers, and were astonished to find that all three lineages had very similar gene maps. Furthermore, these gene maps were also very similar to that of the original natural hybrid species. The same combinations of genes from common sunflower and petioled sunflower occur in each of the hybrids. The explanation offered is that, perhaps, these gene sets work better that any others that would form by more random recombination.

Carol Yoon, New York Times, May 7, 1996

Folate and Pregnancies

Since it is involved in the processes of DNA and RNA synthesis, folate is a must for women contemplating pregnancy. Folate helps to prevent neural tube defects (spina bifida and anencephaly) which occur during the first two weeks of pregnancy. Any women planning to get pregnant should, therefore, increase folate intake before doing so. There are many good sources of folate in various foods: orange juice, leaves of many vegetables (spinach, romaine lettuce, beets, turnips, kale, etc.), green peas, corn, peanut butter, lentils, whole grains (or just wheat germ or wheat bran), pinto and black beans, all citrus fruits, avocados, plantains, cantaloupes, asparagus, sunflower seeds, etc. Pills containing synthetic folic acid can also be taken. Research also suggests that folate may protect women against cervical cancer. It should be noted, however, that both oral contraceptives and aspirin can interfere with the body's ability to utilize folate.

Madeleine Greey, Toronto Star, Jan. 28, 1996

Part 2: Folate and Heart Disease

A study by the Cancer Bureau of Health Canada involving 5,056 patients concluded that those with the lowest blood levels of folate had a 69% higher risk of dying from heart disease that those with the highest levels of folate. The linkage was found in both men and women. Although folate is easily obtained from fresh vegetables, about half of U.S. adults take in less than the recommended dietary allowance for the vitamin.

Kitchener-Waterloo Record, June 26, 1996

Invasive Stonecrop

Crassula helmsii, the Australian swamp stonecrop, forms dense ground-hugging plants with greenish-yellow leaves. It is invading ponds and marshes all over Britain, easily outcompeting native plants. According to Hugh Dawson, senior botanist at the Institute of Freshwater Ecology at Wareham, Dorset: "The plant is amphibious. It can grow on land and in water up to 9 feet deep. It is easily spread because fragments ... can re-shoot and colonise new areas." Botanists have asked the U.K. Dept. of the Environment to ban further planting of this species.

Michael Hornsby, The Times of London, Feb. 19, 1996

Baldness Cure? ... Get Me some!

Foreign follicles may soon tingle from the effects of Zhao Zhanguang's hair growing elixir. Called "101 Hair-growing Essence" (you guessed it! - he had 100 previous formulations that bombed), the product contains a mixture of ginseng, Chinese angelica, root of red-rooted salvia and dried ginger. Former Japanese Prime Minister, Noboru Takeshita, apparently is a satisfied user. Having sold millions of dollars worth of the stuff in China, Zhao recently announced the setting up of foreign manufacturing/distribution offices in Singapore and Brazil. Is Canada next?

Song Ning, China Daily, May 6, 1996

Kew CDs Replay History

The Royal Botanic Garden at Kew has transferred 18,000 historical images onto Photo CD masters as part of a new archive called "**Kewensia Photographic Picture Index**". It includes drawings, engravings, daguerrotypes, paintings, early black and white photographs, and colour transparencies. The project eventually will digitize 120,000 scientific images as a way to provide easy access for journalists, researchers and students.

The Times of London. Feb. 28, 1996

Seedless Plane Tree

The plane tree is one of China's most popular urban trees, but the falling seed balls are often annoying and sometimes downright dangerous. To the rescue comes Zhang Fuxiang, a breeder from central China's Henan Province, who has produced a plane tree which does not fruit. Sadly, however, the leaves will still have to be raked up in the fall.

China Daily, May 4, 1996

Bosnia's "Iron Lady"

Biljana Plavsic, self-described "iron lady" of Bosnian Serb politics, was recently named head of the Bosnian Serb Republic (taking over from Radovan Karadzic in a move forced by international political pressure). A little known fact is that she turns out to be one of that rare breed, botany-professor-turned-politician. The 66-year-old Plavsic's field is phytopathology, and she taught botany for many years at Sarajevo University before being forced to flee the city during the recent conflict. She is an intense Serbian nationalist and is quoted as saying that she would like to "clease eastern Bosnia" of all Muslims. However, Ejup Ganic, a Muslim politician who knew Plavsic before the recent war, commented that: "You are looking for a person where there is no person. She does what Karadzic tells her".

Dean Murphy, Toronto Star, July 7, 1996

Sustaining Mahogany Supply

According to the Rainforest Action Network, based in San Francisco, the bigleaf mahogany (*Swietenia macrophylla*), which grows in tropical rainforests from southern Mexico to Brazil, is an endangered tree. The group calls for a boycott on mahogany products because marketable trees are almost all gone in the Central American forest, and harvesting is depleting the supply in the forests of Brazil and Bolivia. However, Dr. Nick Brokaw of the Mahomet (Massachusetts) Observatory for Conservation Science considers that a boycott of mahogany would be bad because "if there is no market for the wood, the forests will be mowed down and the land turned to agriculture". His organization and other groups are cooperating with the Belize Forest Department in an attempt to develop methods to ensure sustainable production of mahogany trees from the natural rainforest. One of the problems with mahogany is that it is a tree which can only grow in disturbed sites. Such sites occur naturally when old trees fall or when hurricanes create large gaps in the forest canopy. In Belize the only significant regrowth of mahogany trees is along roads (artificial gaps in the rainforest canopy). One project in Belize involves the creation of artificial gaps (ranging from small areas to larger clear-cuts) near existing seed-producing mahogany trees (there may be only one or two of these per hectare). Under good growing conditions the seedlings should grow to marketable size in about 40 years. Although this strategy would help to maintain the natural diversity of the tropical rainforest, it is dismissed by many foresters, who consider that the only way to go is to establish mahogany plantations similar to those which exist in Indonesia, where more that 300,000 acres of mahogany have been planted.

Les Line, New York Times, June 4, 1996

Water Cress Reduces Lung Cancer Risk

A report in *Family Practice* notes that water cress contains a chemical, phenethyl isothiocyanate, which blocks steps in the metabolism of a cancer-causing agent in cigarettes and increases the levels of it expelled in urine.

Marilyn Dunlop, Toronto Star, June 8, 1996

MEETINGS / CONGRÈS

CBCN Workshop

The 1996 Canadian Botanical Conservation Network Workshop: **Partnerships for Plants: Conservation, Biodiversity and Botanical Gardens in Canada** will be held **September 5-9, 1996** at the Royal Botanical Gardens Centre, Burlington, Ontario. The Canadian Botanical Conservation Network (CBCN) is a new organization being developed to provide the botanical gardens, arboreta and others maintaining collections of living plants in Canada with a common forum for exchanging biodiversity and conservation ideas and information and for developing cooperative conservation projects. The workshop is open to all interested persons. The proceedings of the workshop will be published. For further information, contact: **Dr. David A. Galbraith, Coordinator, CBCN, Royal Botanical Gardens, P.O. Box 399, Hamilton, ON L8N 3H8 [email: David.Galbraith@freenet.hamilton.on.ca]** or visit the website: **www.science.mcmaster.ca/Biology/CBCN.**

Allelopathy Congress

The First World Congress on Allelopathy, A Science for the Future will be held in Cadiz, Spain, **September 16-20, 1996.** Information about the congress can be found at the following website:

http://www2.uca.es/dept/quimica-organica/allelopathy.htm

Workshop on Harmful Marine Algae

The Department of Fisheries and Oceans will host the **Fifth Canadian Workshop on Harmful Marine Algae** at the Northwest Atlantic Fisheries Centre, St. John's, NF, **September 11-13, 1996.** The workshop will be organized to promote exchange of new and unreported information and to plan for future research on aspects related to Harmful Marine Algae. The workshop is open to everyone (government agencies, university research community and aquaculture and other harvesting industry). THERE IS NO REGISTRATION FEE. Obtain further information from: **M. A. Paranjape, Ocean Ecology - Science, Department of Fisheries and Oceans, P.O. Box 5667, St. John's, NF A1C 5X1 [E-mail: mparanjape@nflorc.nwafc.nf.ca]**

Plant Reproduction (SCAPE96)

The Scandinavian Association for Pollination Ecology (SCAPE) invites you to its 10th anniversary symposium entitled **The Ecology and Evolution of Plant Reproduction** in Umea, Sweden, **September 25-27, 1996.** Invited speakers include: S. Armbruster, University of Alaska - Fairbanks, S.C.H. Barrett, University of Toronto, P.A. Cox, Brigham Young University, K. Faegri, University of Bergen, D.W. Schemske, University of Washington, J. Schmitt, Brown University, and J.D. Thomson, SUNY - Stony Brook. For more information on the meeting, send **E-mail to: scape96@ekbot.umu.se** or consult the following website: **http://www.ekbot.umu.se/~scape96/index.html**

Lake Symposium

The North American Lake Management Society is holding its 16th Annual Symposium, **People, Lakes and Land: Puzzling Relationships**, at the Radisson Hotel South, Minneapolis, Minnesota, **November 13-16, 1996.** For conference and registration information: **NALMS, P.O. Box 101294, Denver, CO 80250.** For program information: **steven.heiskary@pca.state.mn.us**

CSPP/SCPV Eastern Regional Meeting

The Eastern Regional CSPP/SCPV Meeting will be held the weekend of the **30th of November (1996)** at Wilfrid Laurier University. A banquet is planned to be held on Saturday, the 30th. Guest speakers will include Ann Hirsch, U.C.L.A., Michèle Heath, University of Toronto, and Keith Clay, Indiana University. A more complete program and call for abstracts will be mailed out early October. For further information, contact: **Frédérique Guinel, Dept. of Biology, Wilfrid Laurier University, Waterloo, ON N2L 3C5. Telephone: 519-884-0710 Ext. 2230; FAX: 519-746-0677 or E-mail: fguinel@mach1.wlu.ca**

Carnivorous Plants

The International Carnivorous Plant Conference will be at the Atlanta (Georgia) Botanical Garden, **May 16-20, 1997.** For information, contact: **International Carnivorous Plant Conference, Rt. 1, Box 540-19AB, Conover, North Carolina 28613.**

International Phycological Congress

The First Circular has been sent out announcing the **Sixth International Phycological Congress**, which will be held at the University of Leiden, The Netherlands, **August 9-16, 1997.** The general theme of the 16 symposia is **Algae in a Changing Environment.** The Symposia are grouped into 4 major areas: Cells and Molecules, Evolution, Ecology, Human Affairs. Those interested in attending the Congress are invited to contact the co-conveners: W.F. Prud'homme van Reine **[Prudhomme@rulrhb.leidenuniv.nl]** or Chris van den Hoek **[C.van.den.Hoek@biol.rug.nl]** to obtain the First Circular; or write: **Leids Congres Bureau, P.O. Box 16065, 2301 GB Leiden, The Netherlands.**

Monocot Meetings

It's two years in the future, but not too soon to make plans to attend **Monocots II and the Third International Symposium on Grass Systematics and Evolution**, to be held jointly at the University of New South Wales, Sydney, Australia, at the end of **September, 1998.** Those interested in receiving the Second Circular should contact: **Mrs. Karen Wilson, Monocots II, R.B.G. Sydney, Mrs. Macquaries Road, Sydney, N.S.W. 2000, Australia. E-mail: karen @rbgsyd.gov.au**

CBA BOARD OF DIRECTORS / BUREAU DE DIRECTION DE L'ABC - 1996-1997

Issued quarterly (January, April, July, October) and sent to all members of CBA/ABC. Non-members and institutions may subscribe at a price of $45.00 per annum post free (Overseas airmail: add $10.00). Cheques and money orders (in Canadian funds ONLY) should be made payable to **"The Canadian Botanical Association"** and addressed to the Editor.

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To ensure continuous delivery of the Bulletin please notify the Treasurer promptly of any change of address.

Copy for the October Bulletin must be received before September 15, 1996.

Les soumissions pour le bulletin d'octobre doivent arriver au plus tard le 15 septembre 1996.

Publication date for the April Bulletin: May 12, 1996
Date de publication pour le bulletin d'avril: le 12 mai 1996