BULLETIN

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Editor / Rédaction:
J. F. (Joe) Gerrath,
Guelph

PATRON
His Excellency the Right Honourable / Son Excellence le Très Honorable
Ramon John Hnatyshyn P.C., C.C., C.M.M., C.D., Q.C.
Governor General of Canada / Gouverneur Général du Canada

ON THE INSIDE
À L'INTÉRIEUR

EDITOR'S COMMENTS
COMMENTAIRE DE LA PART DU RÉDACTEUR

Calgary '94

Another Annual Meeting has gone into the record books as one of the best we have ever experienced. Many thanks to C.C. Chinnappa, Chuck Curry and a veritable army of local volunteers who made the Calgary meeting run so smoothly. We came away with wonderful memories: the beautiful campus and city setting, the generally good weather (we thankfully missed the severe tree-toppling wind storm that occurred on the Friday before the start of the conference), the good exercise we got going from the residences to the Science complex, the western-style barbecue and the hilarious auction (highlighted by a bid of about $28.00 for one of last year's T-shirts and by the bidding strategy of "50-cent-Dengler").

Once again (how many years is it now?) I served on the judging committee for the Lionel Cinq-Mars Award. This year we trooped around to various sessions to hear 20 excellent student presentations. We had a most difficult time deciding a winner. Because of lack of space in this issue, the formal listing of all of the awards (including pictures, etc.) given at the Calgary meeting will be deferred until the October issue of the Bulletin. However, I can briefly give the names of the awardees here. The Lawson Medals were awarded to George Barron (Guelph) and to Richard Greyson (Western Ontario). No Elliott Award was given this year.

The Weresub Award went to Wendy Untereiner (Toronto). The Macoun Bursary was received by Jeff Anderson (Ottawa). The Cinq-Mars Award was given to Anne Worley (Calgary) with Honorable Mentions going to Jeff Anderson and André Arsenault (U.B.C.).

The banquet at Calgary was, of course, arranged as a special tribute to Taylor Steeves. It attracted many of Taylor's former students and there was also a surprise appearance (to Taylor) by Ian Sussex. Taylor received a sound verbal roasting and was presented with a bound version of the special issue of the Can. J. Bot. dedicated to him. He can also legally wear an official Calgary white Stetson, once he gets the correct size.

Incidentally, Jean and I sat at a rollicking "bilingual table" during the banquet, and I managed to add to my knowledge by learning that the French term for duckweed (***Lemna***) is *merde de crapaud* (!). Thanks, Christian.

Guelph '95

We can now look forward to next year's joint meeting here at the University of Guelph with CSPP/SCPV. Since I am only let out of my editorial cubbyhole to be fed, watered and exercised, I know very little of the details from the various huddles which have been occurring around me. I have weaseled out of them that one of the symposia bears the title, "Plants in Nasty Places". I can't wait to hear what that is about.

Secretarial Peregrinations

Those who were at Calgary already know that the Secretary will be taking up a tenure-track position at the University of Northern Iowa. Before too many tsk!-tsk!s pass your lips, let me emphasize that we are still happily married and will communicate and get together as much as possible in the future. We are now part of an increasing trend among married academics, since we know of several other couples who have had to do this in order to further the career of one or the other partner.

Editorial Office Changes

After her move in August Jean will no longer be acting as Associate Editor of the Bulletin. After three years of checking up on me, she figures I am ready to strike out on my own as an unassisted editor for the English text. I plan also to find a new francophone Associate Editor to relieve Christian Lacroix, who has been marvelous at providing quick translations when needed. Christian will be busy enough during the next couple of years as CBA/ABC Treasurer and as chief organizer of the Charlottetown meeting. Any volunteers?

I would like to thank those who made complimentary remarks to me about the Bulletin at Calgary. The fact that I was asked several times when this July issue would be mailed indicates that there are at least some members who avidly anticipate the arrival of each issue. This issue has been a bit of a rush job, so I hope it meets your expectations.

E-mail

A quick glance at the box below will confirm that I have joined the Internet and am currently blundering my way through its intricacies. I think I have E-mail pretty well figured out so that I will be able to communicate with Jean and with any of you that want to contact me to praise, to bash, or to ask for or supply information. In case you never look at boxes in the Bulletin, my E-mail address is **jfgerrat@uoguelph.ca** which I agree is a bit strange (because Jean had already socked up the jgerrath address at Guelph).

Three More Years!

Well, the Board of Directors had their chance to replace me at Calgary, but they didn't. So, I'm stuck ... that is ... you're stuck with this editor for another three years (that's as far as I can go, I think, according to the By-Laws). I'll have to try to think up some changes in design or format so that you (and I, for that matter) will not get bored with the Bulletin in its current state. As I do in every Bulletin, I repeat my plea for contributions from you in order to keep the Bulletin serving our Association's needs. Keep them coming for another three years, at least.

Joe Gerrath, Editor

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REPORTS FROM THE ANNUAL MEETING - CALGARY

PRESIDENT'S REPORT

The past year has been a very successful one for CBA/ABC. We've managed to stop a dangerous hemorrhaging of membership and have begun again to make some gains, thanks mainly to our lower fee structure since leaving CFBS. Several new initiatives (*i.e.* Development Committee) and scholarships are now well established and we hope they will continue to grow in the future.

The Museum of Nature: The many efforts made by CBA/ABC as a group, and by individual members seems to have played a role in the government's decision to have this matter looked at by the Parliamentary Standing Committee on Canadian Heritage. Having read some of the transcripts of this Committee, it seems that they are taking this matter quite seriously. I doubt that what has happened will be reversed, but at least it will slow the process of dismantling the current scientific programmes.

The 1993 Meeting in Ames, Iowa: Last year's meeting in Ames, Iowa, held jointly with BSA, was a great success. Thanks primarily to a new spirit of cooperation between the executives of the CBA/ABC and BSA everything went extremely well. We were delighted that the President of BSA, Greg Anderson, came to our Awards Luncheon and participated in the associated events. He even wore one of the famous CBA/ABC T-shirts designed by Director Melissa Farquhar. Considering that we feared this meeting might float down the Mississippi River, it all turned out quite well. BSA has expressed an interest in holding a joint meeting with us in Montreal in 1997, even though AIBS will not be involved. André Fortin would very much like to inaugurate the new Plant Biology Building at the Montréal Botanical Gardens with this joint meeting. If it all works out it will be a truly memorable experience.

Botanical Congress in 1999: I received a letter from Peter Raven, Director of the Missouri Botanical Garden, asking for a letter of endorsement for the proposal that the XVI International Botanical Congress meet in St. Louis in 1999. Since this proposal has now been accepted, it is likely that the CBA/ABC annual meeting that year will be part of the Congress.

Conservation Matters: Letters were sent out to various agencies and government departments regarding issues of concern to CBA/ABC such as conservation of wetlands and endangered species. This was the year that Dianne Fahselt resigned as Chair of the Conservation Committee and a special thanks goes out to her for her tireless work in this area. The new Chair of the Conservation Committee is Heather Stewart who was confirmed in this post at the mid-term executive meeting.

Awards: An Awards Committee is appointed to consider nominations for the Lawson, Elliott and Macoun Awards. The Committee consists of myself as Chair, Jean Gerrath, Paul Catling, Keith Winterhalder, Christian Lacroix and Larry Peterson. The nominees for these awards were again excellent this year. There were no Elliott Award nominations this year. The results of the Lawson Medals and the Macoun Award are announced at the CBA/ABC Banquet at the Calgary Annual Meeting.

I received a letter from Randy Currah, Chair of the L.K. Weresub Awards Committee, informing me that the winner of this year's award is Wendy A. Untereiner of the Department of Botany, University of Toronto.

General Comments: Since I step down as President of CBA/ABC at the Banquet on Wednesday, June 29th, I would like to take this opportunity to thank the many hard working volunteers who make the Association function so smoothly. It seems at times that the job of President is simply to get out of the way of the people in the Association who do the real work. The past two years have certainly been very turbulent and there were times when we wondered if we would even survive. We have not only survived, but we're now beginning to grow again. There are still difficult times ahead but we have a superb, dedicated executive who are willing to take on the challenges. I would like to particulary single out Jean and Joe Gerrath for their tireless work; Joe as Bulletin Editor and Jean as Secretary and Development Committee Chair. I can honestly say that this Association would certainly be much poorer without the hard, selfless work that they put in. They certainly carry on the great tradition of dedicated "CBA/ABC couples" ... *e.g.* Iain and Sylvia Taylor, Janet Stein and Roy Taylor. Jean will be taking up a position at Northern Iowa University in August, but will carry on as Secretary (thank goodness!). Thanks for everything, Jean, and good luck in Iowa!

Usher Posluszny, President, 1992-94

PAST-PRESIDENT'S REPORT (NOMINATING COMMITTEE)

The following nominations have been obtained for the positions indicated:

Secretary (1994-1996) [Continuing]
Jean M. Gerrath
University of Northern Iowa, Cedar Falls, IA

Directors (1994-1996)
Arthur Davis
University of Saskatchewan, Saskatoon, SK

James Kemp
University of P.E.I., Charlottetown, PEI

Ellen Macdonald
University of Alberta, Edmonton, AB

The Board of Directors has appointed Joe Gerrath to a second 3-year term as Bulletin Editor.

Paul Catling, Past President, 1992-94

TREASURER'S REPORT

The CBA/ABC membership at the time of this annual meeting comprises 185 Regular Members, 32 Retired Members, 53 Student Members and 2 Life Members. The use of a new computer program, Microsoft Money, has greatly simplified the keeping of the Association's accounts.

INCOME & EXPENSE REPORT
GENERAL ACCOUNT - May 31, 1994

INCOME		
Starting Balance	2,435.67	
Membership Income	4,485.01	
Deposits from Award Accounts	1,325.00	
Bulletin Subscriptions	235.00	
GIC Interest	1,050.00	
GST Refunds	287.53	
Truro AGM surplus	4,916.00	
Other income	1.55	
Total Income		25,235.76
EXPENSES		
Awards		
Cinq-Mars	200.00	
Macoun	1,000.00	
Weresub	1,000.00	
Plaques/Certificates	1,082.59	
Bulletin [Apr. 93 - Apr. 94]		
Printing - Bulletins	2,483.27	
Printing - Supplement	564.02	
Postage	1,647.54	
Stationery, etc.	220.12	
Transfers to Award Funds		
Ecology	1,045.00	
Macoun	1,134.55	
Porsild	1,658.63	
Steeves	845.00	
Weresub	1,195.00	
Symposium Support at Ames	601.65	
Secretary's Expenses	95.56	
Treasurer's Expenses	407.91	
Conservation Committee	178.77	
Youth Science Foundation Award	650.00	
Calgary AGM Startup Fund	1,200.00	
New Accounts	500.00	
Miscellaneous Expenses	134.20	
Total Expenses		18,066.56
Income Less Expenses (Closing Balance)		7,169.20

NET WORTH STATEMENT
May 31, 1994

Bank and Cash Accounts:		
General Account	7,169.20	
Weresub Account	320.58	
Ecology Award Account	1,221.85	
Macoun Prize Account	1,693.97	
Porsild Award Account	1,914.08	
Steeves Award Account	844.05	
Total Bank and Cash Accounts		13,163.73
Other Assets (Investments)		
General Account T.D.	12,480.90	
General Account GIC	20,000.00	
Weresub Account T.D.	17,824.20	
Weresub Account GIC	1,651.48	
Macoun GIC #1	1,800.00	
Macoun GIC #2	1,773.98	
Macoun GIC #3	2,201.97	
Total Other Assets		57,732.53
Total Assets		70,896.26
Liabilities		nil
Net Worth		70,896.26

Christian Lacroix, CBA/ABC Treasurer

SECRETARY'S REPORT

This year has proceeded very smoothly, with very little to report. As usual, the main correspondence has dealt with 18 letters requesting information about herbs (we are listed as a source of herbs and herb information in the Readers' Digest gardening book). I also received and answered 8 inquiries about the Association and career prospects for botanists.

In August, 1994, I will be taking up a tenure track position at the University of Northern Iowa, but I have agreed to continue as Secretary of CBA/ABC for another term of two years. My address for correspondence will be:

Department of Biology, University of Northern Iowa, Cedar Falls, IA 50614-0421.
FAX: (319) 273-7125

Telephone and E-mail are still to be arranged, but will be available soon after I am established through E-mail or by contacting the Bulletin Editor (to whom I am still happily married). E-mail messages can be sent to my Guelph account temporarily and will be retrieved through telnet (or send them to the Editor, who will relay them to me).

Jean Gerrath, CBA/ABC Secretary

BULLETIN EDITOR'S REPORT 1993-1994

Another 4 issues of the Bulletin have been completed, along with a somewhat overambitious supplement containing a historical review, the By-Laws and members addresses. Minor problems have cropped up occasionally, including delays in getting promised contributions and the working out of the label production process with the new Treasurer. This year has been a bit better for obtaining contributions from the membership. Word may be slowly getting around that a good proportion of the members actually read the Bulletin, and that it can serve as a conduit to pass on information (or to obtain information). Sadly, I also get complaints that such-and-such meeting, etc., has not been listed (but often they had been listed a couple of issues previously to allow sufficient lead time for inquiries). This is the end of my 3-year term as Editor, but I have decided to permit the Board of Directors to appoint me for another term, if they so desire. It might be prudent to begin thinking now of a person who would be willing to take over from me as the next Editor in 1997. The following is a summary of Bulletin expenses for 1993-1994. The totals do not match those in the Treasurer's Annual Report because the April 1993 Bulletin was paid for in the following fiscal year. Using these figures as a guide I would ask the Treasurer to include $3300 for Bulletin expenses in the Association's Budget for 1994-1995. This will allow me to produce another Supplement for the October mailing (this time listing only members and their contact information, much of which has changed during the past year).

SUMMARY OF EDITOR'S EXPENSES - 1993-94

August 1993 Bulletin:		
Printing	469.15	
Postage	183.33	
Total		652.48
October 1993 Bulletin & Supplement:		
Printing - Bulletin	396.18	
Printing - Supplement	564.02	
Postage	284.68	
Envelopes	14.93	
Total		1259.81
January 1994 Bulletin:		
Printing	405.72	
Postage	290.39	
Envelopes	30.20	
Total		726.31
April 1994 Bulletin:		
Printing	423.83	
Postage	231.85	
Total		655.68
Miscellaneous (Postage - Review Books)		4.02
Total Expenses		3298.30

Joe Gerrath, CBA/ABC Bulletin Editor

CONSERVATION COMMITTEE REPORT

1. Canadian Museum of Nature: - In response to events in July 1993, the previous chair sent a letter to Allan Emery, Director of the Museum. In response to this letter the Conservation Committee received a reply from Dr. Emery regarding the future direction of the Museum, a vision statement, and operating and capital budgets for 1993. The chair has offered support in the efforts of the Friends of Nature in their attempt to have a review done on Museum management.

2. Ministry of Natural Resources (Ontario): - The chair has received the **Draft Statement on Environmental Values**. This document describes how the Ministry will apply and consider the Environmental Bill of Rights in its future decision making. This draft statement is available for review until August 15, 1994. As well, the chair has received a news release concerning the prescribed burn at Turkey Point.

3. Natural Heritage League [NHL] (Ontario): - On February 7, 1994, there was an important meeting of the NHL concerning the future of this association after April, when the Ontario Heritage Foundation funding ceased. The member groups voted to instate a user-pay option. That is, that member groups would be required to pay a membership fee according to their ability to pay. The chair received a later draft statement concerning the reconstituted NHL, and the fee that the CBA/ABC would be required to pay (Group A = $100.00) is the minimum. In return for the money, the CBA/ABC would receive access to a large coalition of Government and non-governmental conservation organizations, a newsletter, access to an electronic bulletin board and a yearly conference.

4. Canadian Nature Federation: - The chair received a copy of the discussion paper for the EPIC (Endangered Plants in Canada) workshop of the CNF on February 18, 1994, in Ottawa, but was unable to attend.

5. Parks Canada: - The chair has received notification of a new Parks Canada policy document entitled **Parks Canada Guiding Principles and Operational Policies**.

6. The Conservation Committee is still seeking a representative for Carolinian Canada, as John Morton has asked to be replaced. The chair would appreciate any suggestions.

Heather Stewart, Committee Chair

SCIENCE POLICY COMMITTEE REPORT

The Friends of the Museum of Nature has been formed, and has shown leadership in trying to reverse some of the decisions made last year. We have cooperated with them, and have sent them copies of our correspondence and our resolutions. Members are reminded that CBA/ABC has a functioning Science Policy Committee which is prepared to take action on any national or provincial science policy problems which are brought to its attention.

Paul Catling, Past President and Committee Chair

DEVELOPMENT COMMITTEE REPORT

The Committee organized two major fund-raising activities at the Calgary meeting. Melissa Farquhar was instrumental is organizing the production of a special Calgary '94 T-shirt, which was an unqualified hit. Melissa's "falling-leaf-logo" design from last year's T-shirt was on the back, and a special Calgary "white Stetson" design (by C.C. Chinnappa and Tanya Hooker) was on the front. The long-lost CBA/ABC lapel pins were rediscovered this year and placed on sale. There are very few pins left and we almost sold all of the T-shirts. After production costs are paid, we should have about $450.00 to add to the Macoun Fund.

The first (we hope, annual) auction of botanical memorabilia was held during the barbecue at the Rafter Six Ranch. Auctioneer Hugues Massicotte managed to coax some splendid bids from a very receptive and amused audience. A further $176.50 was raised for the Macoun fund.

We had planned to produce a recyclable coffee mug for sale at Calgary, but found that using the multicoloured T-shirt design on the mug would have meant that we would have had to price it at a level higher than local Guelph students (our market survey group) would have been willing to spend. We hope to rethink our design ideas and produce a more affordable mug for the Guelph meeting next year.

Next year Tim Dickinson will act a co-chair of this committee. He will explore the possibilities of obtaining funds through a new corporate membership category. This idea is contingent on consultations with tax experts regarding our ability to offer such memberships.

Jean Gerrath, Committee Chair

CANADIAN JOURNAL OF BOTANY EDITOR'S REPORT - June 1994

CJB has had another busy year during which:

- ❑ manuscript acceptance time was slightly up to 154 days,
- ❑ publication time fell to 310 days (10+ months),
- ❑ we still did not achieve "cover month" publication,
- ❑ we received substantially fewer papers in Mycology & Plant Pathology, Ecology, and Systematics.

Fewer submissions may reflect reduced individual research funding, although the drop in Systematics may reflect our history of slow reviewing.

The quality of the Journal rests on the commitment of over 500 peer review consultants, without whose efforts we could not function. It is a pleasure to thank all of you who have made the time to provide rigorous, comprehensive and constructive reports. The current acceptance rate (47%) reflects the willingness of both consultants and Associate Editors to demand ever rising standards. The editorial quality of submissions and accepted papers is improving, thanks to the efforts of Susan and Pat in Vancouver.

1993-94 saw several changes in the Editorial Board. I thank Denis Barabé, Nicole Benhamou, Paul Harrison (who did an outstanding job as Editor-*pro-tem* during my sabbatical leave), Doug Larson, John Morton, Kris Pirozynski and Usher Posluszny for their work over the years, and welcome Alan Bown (Physiology & Biochemistry), Christian Lacroix (Structure & Development), John King (Physiology - Tissue Culture), Tony Little (Tree Physiology) and Keith Seifert (Mycology & Plant Pathology). I know that you already are witnessing their excellent contributions to CJB.

When I was appointed to a second term in January 1994, I set some simple performance goals. These are to bring CJB to first place as the fastest publishing interdisciplinary plant journal, and to attract a steady annual submission rate of 450-500 papers. Each year I ask the question, "How well does CJB serve your needs?". I urge you once again to give me your advice by phone, letter or E-mail. Please encourage your colleagues, especially those whom you perceive as "up-and-coming", to submit their work to Can. J. Bot.

The 1994 editing workshop on **Reviewing a Journal Submission**, was presented at the CBA meeting in Calgary. I regret that I was unable to attend the CSPP meeting this year.

Respectfully submitted,
Iain E.P. Taylor, Editor.

Table 1. Manuscript Processing 1992-1993

	1992	1993
Papers Received	474	413
No decision yet	0	13
Accepted	256	195
Rejected	195	204
Withdrawn	6	14

Table 2. Acceptance by Subject Area 1992-1993

	1992	1993
Overall Acceptance %	56%	47.2%
Cell & Molec. Biol.	1/2 (50%)	4/6 (67%)
Ecology	50/109(46%)	43/83 (52%)
Mycology	75/121(62%)	60/111 (54%)
Phycology	6/9 (67%)	2/7 (29%)
Physiology	32/74 (43%)	31/98 (32%)
Structure	48/79 (61%)	36/69 (52%)
Systematics	36/52 (69%)	19/35 (54%)

REPORTS FROM SECTIONAL MEETINGS AT CALGARY

MYCOLOGY SECTION

Randy Currah - University of Alberta

CBA/ABC Meeting in Guelph: Next year's Weresub Lecture will be given by George L. Barron. Melanie Jones volunteered to serve as a judge for the Lionel Cinq-Mars Award, with Len Hutchison as alternate. The Mycology Section will put on a workshop on the identification of ectomycorrhizas and ectomycorrhizal fungi, which Randy Currah will coordinate.

Fungal Biodiversity Issues: A working group (Keith Egger, Melanie Jones, Leonard Hutchison, Randy Currah) was struck to examine and report on two issues:

(a) Preparation of a document concerning sampling procedures for mycorrhizal fungi, and
(b) Fungal biodiversity - "Red Book" issues.

Mycology Positions: Melissa Farquhar suggested we address the issue of declining numbers of Mycology positions. We will start with the situation at the University of Guelph by writing to the Vice President Academic. We will also contact names on the Weresub mailing list to ask them to write in support of keeping a Mycology position at the University of Guelph.

Mycological Congress in Vancouver: Iain Taylor told us that the Proceedings of the Symposia will be published in Can. J. Bot. CJB will also publish Ralph Estey's History of Mycology in Canada.

Teaching Exchange: George Barron expressed interest in the Mycology Section initiating an exchange program of Mycology teaching materials (slides, cultures, etc.).

New Section Chair: Melanie Jones volunteered to be the Mycology Section chair for 1994-95.

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STRUCTURE & DEVELOPMENT SECTION

Christian Lacroix - University of Prince Edward Island

1995-95 Officers: Bill Remphrey will be the new Section chair and Art Davis will be the new Secretary of the Section.

1995 Cinq-Mars Judges: Vipen Sawhney will serve as judge with Melissa Farquhar as alternate.

Steeves Award: The Steeves Award is to be presented for the best student paper (arising from thesis work) published in the previous calendar year. It was moved, seconded and passed that the Weresub Award guidelines be used as a model for the Steeves Award. The Steeves account now has about $900. It was moved, seconded and passed that the section request $100 from the CBA/ABC General Account as prize money so that the first award can be made at Guelph. A committee of four will administer the award selection, including the Section Chair and Secretary, and a francophone member. For 1994-95 the Steeves Award Committee is: Bill Remphrey, Art Davis, Denis Barabé, Larry Peterson. The Committee needs to consider how best to alert members of the botanical community as to the need to submit suitable papers.

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SYSTEMATICS & PHYTOGEOGRAPHY SECTION

Ernie Small - Agriculture Canada, Ottawa

Canadian Biodiversity: A Guide to Current Botanical Specialists and Literature: A proposal for $1000 of support for publication from CBA/ABC gained the support of the outgoing executive at the Sunday meeting and the support of the Systematics and Phytogeography Section on Monday. On Tuesday it was discussed briefly at the meeting of the Ecology Section. On Wednesday it was discussed near the end of the Annual General Meeting and, lacking a quorum to vote on the issue, it was decided that E. Small would submit a resumé and ballot form to Jean Gerrath for a mail vote. Keith Egger and Melanie Jones expressed interest in exploring the organization of a parallel venture for Mycology, and E. Small will send them documents relating to the vascular plant and bryophyte project.

Mail Survey: In the mail survey to assess areas of Canadian systematics and phytogeography most in need of financial support, 78 forms were returned. The results on the 23 questions were discussed. A report will be submitted in the future for publication (with P. Catling and J. Cayouette), perhaps in the CBA/ABC Bulletin.

Guelph Meeting: Two proposals for symposium topics were discussed. One suggested topic was on biological consultant activities in Canada. The other was on biodiversity. Subsequenty it was learned that symposia at Guelph had already been tentatively decided. However, a request will be made to present a half-day symposium, tentatively entitled: **Biodiversity: Genetic, Species, Ecosystem, Landscape.** The Section plans to present the first Porsild Award at the Guelph meeting.

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Editor's Note: At the time this issue went to press there was no report available from the Ecology Section Meeting in Calgary. The General Section apparently did not have enough attendees to hold a meeting in Calgary (or perhaps they all went to other concurrent sectional meetings).

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Jean Gerrath
[see Secretary's contact info on page 60]

MEMBERSHIP COMMITTEE

Melissa Farquhar
[see Director's contact info on page 60]

SCIENCE POLICY COMMITTEE

Usher Posluszny
[see Past President's contact info on page 60]

NEW PUBLICATION

Biodiversity in British Columbia: Our Changing Environment. University of B.C. Press. $29.95.

Environment Canada released this report in April, 1994. It consists of 425 pages in 30 chapters and is a collaboration among some 170 of B.C.'s top specialists in various fields of biodiversity. It provides a reference for people working to conserve biodiversity, and an analysis of the challenges facing conservation of biodiversity in the province.

The report begins by establishing a philosophical context on the importance of conserving systems by J. Stan Rowe, Professor Emeritus, University of Saskatchewan, now living in New Denver, B.C., and ends with a discussion of the ethics of land use by Robert F. Harrington, winner of the 1991 award from the Premier of B.C. for Environmental Educator of the Year. Between are chapters on: classification of rarity, determination of conservation status, rare and endangered species (of all taxa for which inventories are available), exotic species (in freshwater, marine and terrestrial environments), existing and potential threats to B.C.'s ecosystems, possible effects of climate change and tropical deforestation on B.C's ecosystems, and protected area programs in the province.

The report may be ordered from:

University of B.C. Press
University of British Columbia
6344 Memorial Road
Vancouver, BC V6T 1Z2
Tel.: (604) 822-5959; FAX: 1-800-668-0821

Editor's Note: This new-publication report is an edited version of a posting which was received by the Secretary through the Internet. Further information on the Environment Canada report may be obtained from the original author of this summary:

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Canadian Wildlife Service
P.O. Box 340, Delta, BC V4K 3Y3
Tel.: (604) 946-8546; FAX: (604) 946-7022
e-mail: harding@cwsvan.dots.doe.ca

CBA/ABC AWARDS AT CALGARY

A complete listing of the CBA/ABC Awards presented at Calgary, including photographs and citations, where available, will be in the October issue of the Bulletin. We also hope to publish the address given by Taylor Steeves during the ceremony at which he was honoured on the occasion of his retirement (Please, don't forget to send me a copy, Taylor).

Joe Gerrath, Editor

Science is Fun!

As Scientific Research should be FUN!
I say to all who've gathered here, Well done!
You deserve congratulations!
For your vast imaginations!
And uncovering discovering is FUN!

For uncovering, discovering ideas
Is a joy to life that lasts for many years.
And I know that you've all grown
By facing the unknown,
And living with its challenges and fears.

In fact, instead of fear, there can be titillation there
As you wonder and you ponder an idea,
And in challenging the mind,
I suggest to you, you'll find
New understanding and a mind more clear.

For fundamental research should be FUN
As it involves a lot of ted-i-um!
But sometimes there's a high
And you know the reason why
You survive through lows and mental bor-e-dom.

Yes! Science is a life and a love.
When inspired, one can rise above
What paper work may do
In soul-destroying you
With memos, budgets, writing up, to shove.

Yes! Science may bring fun and may bring joy,
And if you're very lucky you'll employ
The hours of many days
With a salary that pays
You doing science that you most enjoy.

But if fundamental research is no FUN,
But to you a form of stress and tedium,
Then explore your other skills
To find where your talent thrills
And enjoy your life, for you have only one!

Susan Aiken, Canadian Museum of Nature

Editor's note: These verses were the basis for a talk which Susan Aiken gave at a High School Science Fair in Ottawa. I hope you will agree with me that this type of presentation is a great way to get your point across to students.

Request for Records of Canadian Arctic Benthic Macroalgae

The National Atlas Information Service, Natural Resources Canada, in co-operation with the Canadian Museum of Nature, has prepared a georeferenced database of the Canadian arctic benthic marine macroalgae. This was based on **A Catalogue of the Marine Algae of the Canadian Arctic** compiled by R.K.S. Lee and published in 1980 by the National Museum of Natural Sciences (now the Canadian Museum of Nature) as **Publications in Botany, No. 9**.

This database of over 2200 records, comprising 113 genera and 180 species, subspecies and varieties, is georeferenced using latitude/longitude coordinates for computer mapping and analysis by GIS techniques. It is potentially a valuable tool for the assessment of areas of greatest benthic marine algal diversity in Canadian arctic waters and can be used in conjunction with other data sources to assess coastal marine areas that could be designated as marine parks or reserves. The database will be used to compile a preliminary list of candidate species that are potentially at greatest risk due to their rarity in the Canadian Arctic for use by the Plants Subcommittee, Committee on the Status of Endangered Wildlife in Canada, chaired by Erich Haber.

The database will also be used to prepare an **Atlas of the Benthic Marine Macroalgae of Arctic Canada**. Planned for inclusion are brief species texts indicating habitat, range and an assessment of rarity together with a distribution map. In order to be as up-to-date as possible, we would like to include additional collection records that were made in Canadian arctic waters subsequent to the publication of Lee's catalogue.

We request your assistance in drawing our attention to institutional collections that may contain records of marine benthic macroalgae collected in the Canadian Arctic that may not have been included in Lee's catalogue or collections that you or a colleague may have made and would be willing to share for the preparation of the Atlas. The voucher collections should be available at a recognized institution and the specimens should have been authenticated by a specialist. Contributors would be acknowledged in the publication. Collections need to have specific geographical site data such as the name of a populated place, or precise locality along a coastline, island, bay, etc., given in distance from a recognized map position. The preferred specification for site would be the precise latitude and longitude coordinates so as to make computer mapping and analysis as accurate as possible.

Correspondence should be addressed to:

Dr. Erich Haber or Dr. Michel Poulin
Research Division
Canadian Museum of Nature
P.O. Box 3443, Station D
Ottawa, Canada K1P 6P4.
Tel.: (613) 990-6437, FAX: (613) 990-6451.

Poorly known economic plants of Canada. 3. *Hydrastis canadensis* L.

P. M. Catling and E. Small, Biological Resources Division, CLBRR, Agriculture and Agri-food Canada, Saunders Bldg., Central Experimental Farm, Ottawa K1A 0C6

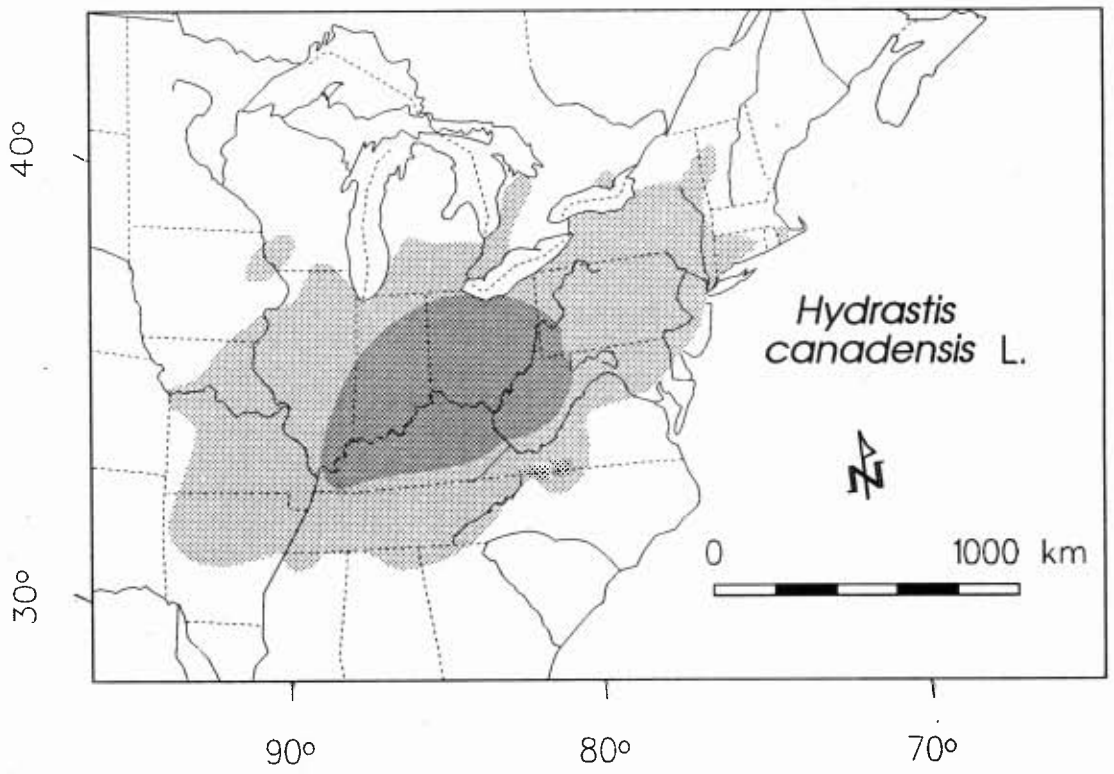
Common names: Goldenseal, Yellow Root, Orange-root, Yellow puccoon, Tumeric, Ground Raspberry, Eye-root. French: Sceau d'or. The name "golden seal" is evidently derived from the seal-like scars on the rhizome and its golden or yellow colour. It is usually classified with the buttercups (Ranunculaceae), but it is very distinctinctive and sometimes placed in its own family (Hydrastidaceae).

The rough-hairy, perennial plants reach 0.5 m tall and have 1-3 palmately lobed leaves up to 25 cm in diameter with 5-7 doubly serrate lobes. Single flowers with the numerous stamens and pistils characteristic of the buttercup family appear in April or May. The most evident parts of the flowers are the white filaments. The sepals and petals are small and fall soon after the flower opens. The leaves are conspicuous and resemble those of ***Hydrophyllum canadense***, but differ in being palmate. The raspberry-like fruit, considered inedible, is a distinctive cluster of scarlet, basally-fused berries which ripen in July and August. The seeds are 2-5 mm long, shiny and dark brown or black with a small keel. The yellowish, knotty rhizome, 4-7 cm long and 0.5-2 cm wide when fresh, contains a bright yellow juice, and is an important source of medicinal alkaloids. The root is sometimes confused with the yellow roots of other plants such as Goldthread (***Coptis trifoliata***), Yellow Root (***Xanthorhiza simplicissima***) and Wood Poppy (***Stylophorum diphyllum***).

Goldenseal occurs in rich, often moist, deciduous woodlands from southern New England west through southern Ontario to southern Wisconsin, south to Arkansas and northern Georgia. It belongs to the group of plants that occurred in the ancient arctotertiary forest which encircled the northern hemisphere 15-20 million years ago. Its nearest relative, ***Glaucidium palmatum***, occurs in Japan. Goldenseal was only ever abundant in a limited area in the central portion of its total range (darker shading on accompanying map) in the states of Indiana, Kentucky, Ohio and West Virginia. Collecting for the drug trade during and after the late 1800s had the effect of drastically reducing natural populations, but habitat destruction also played a role in its decline. In Canada it occurs only in southern Ontario and has been given the official status of a "threatened" species with priority 1 ranking (the highest) for protection in Canada.

The indigenous people of eastern North America used Goldenseal as a yellow dye as well as in treatment of various kinds of illness, especially those requiring antimicrobial action. However, Goldenseal appears not to have been a medicinal plant of major importance until the mid 1800s when methods of refining the alkaloids hydrastine and berberine were developed. The properties of the alkaloids were conveniently obtained through chemical combinations such as the readily soluble salt, hydrastine hydrochlorate. The primary use of Goldenseal in the mid to late 1800s was in the treatment of digestive disorders, inflammation of mucous tissues and skin diseases, but it soon developed a reputation as a general tonic.

Hydrastine and berberine are particularly pharmacologically active, affecting circulation, uterine functions, and the central nervous system. Hydrastine constricts peripheral vessels, decreases blood pressure and stimulates involuntary muscles. Berberine inhibits synthesis of DNA, proteins and oxidation of glucose. It is used for various digestive and skin problems. Recently berberine was found to be active against the protozoan responsible for Chagas' disease, a major health problem in Central and South America. Goldenseal alkaloids also have some anti-tumor activity. However, use of Goldenseal in modern medicine is very limited. The drugs are toxic and dangerous levels may need to be administered to achieve therapeutically useful effects. Even external use can produce ulceration. Taken orally in excess dosage, Goldenseal can produce convulsions like those



produced by strychnine, and may lead to paralysis, respiratory failure and death. Since it can promote miscarriage, it should not be taken during pregnancy.

Goldenseal is a good example of how medicines intergrade into poisons. Its drugs are potent, but pose a serious risk, thus requiring professional guidance and research.

The prominent use of Goldenseal in proprietary medicines of past times has been resurrected in a growing popularity of the so-called "health food" industry. Currently there are approximately 40 over-the-counter drugs containing golden-seal or its active ingredients on the Canadian market as elixirs, tablets, capsules or suppositories. It is also sold as an ingredient of some herbal teas. When Goldenseal tea was rumoured (incorrectly) to prevent detection of morphine in urine samples, it became popular with drug users for preventing the detection of marihuana and cocaine as well. It was also used on drugged race-horses.

Like Ginseng and May-apple, a large part of the supply of Golden-seal came from mountainous regions of Kentucky and West Virginia, where it was collected by people whose economy was based largely on the virgin forests of the steep mountain slopes and deep valleys. In the late 1850s it was valued at $2.20/kg, but this value decreased as the market became adequately supplied. In the late 1800s 63,500-68,000 kg were collected annually, most of this being used in North America with only 680 kg exported to Europe. About 550 dry roots are required to make one kg. Since it was collected mostly in the Ohio valley region, Cincinatti became the major source of supply.

Although much of the current supply is from wild-collected plants, Goldenseal has become a widely cultivated plant. Because increasing demand poses a threat of extirpation in some areas, it is possible that most of the future supply will come from cultivated plants. It has been cultivated in Arkansas, Michigan, North Carolina, Oregon, Tennessee, Washington and Wisconsin, the annual production from cultivated plants exceeding several tons. Some Ginseng growers have found economic benefit in growing some Goldenseal as well because it has similar environmental requirements allowing the use of similar equipment. It may be a little easier to grow than Ginseng because it tolerates slightly higher light intensities and is less subject to diseases and pests. The growing popular market for Goldenseal products suggests a potential for use of the plant as a diversification crop in southern Canada.

BOOK REVIEWS

An African Savanna. Synthesis of the Nylsvley Study. By R.J. Scholes and B.H. Walker. 1993. Cambridge University Press, Cambridge. Price: US$69.95.

All teachers of courses in ecology and biogeography, and especially those in Canadian and other temperate region universities, should welcome this excellent source book on one of the largest, most important, interesting, and least known terrestrial ecosystems. It is a notable addition to the literature on tropical biomes, helping to remove the bias in textbooks on ecology to higher latitude systems. Savannas make up one fifth of all terrestrial biomes, and 40% of the vegetation of the African continent. Ecologists of all stripes will find much of value in this clearly written and illustrated, well balanced synthesis of the results of a sixteen-year, multi-disciplinary investigation of a single site in South Africa. Not only is the science presented well, but the insights into the potentials and pitfalls of big, expensive, cooperative studies of ecosystems will be of immense current relevance, in Canada, for example, where the national government is starving individual research grant and scholarship funding at the expense of large, multi-disciplinary endeavours designed to meet variously fashionable global problems. Chapter 18, "Reflections on ecosystem studies", addresses these questions with refreshing honesty - the historical background (rooted in the International Biological Programme of the sixties many of us remember as the founder of boondoggles that funded some good and much mediocre research, but rarely made much progress towards advancing knowledge of ecosystem functioning); the costs and products; the strengths and weaknesses of the science; and some principles for managing future ecosystem studies. Granting agencies should circulate copies of Chapter 18 to all relevant personnel.

Forgive that little polemic! The seventeen chapters that precede it are full of excellent science, new insights, dismantled myths, and ideas for future research. Chapter one is the best description and definition of the savanna ecosystem I have seen, and will be particularly useful to ecologists who have yet to actually visit a savanna region. After separate chapters on the prehistorical and historical human impact on the study site, the Nylsvley Nature Reserve in northwest South Africa at latitude 24°39'S, well balanced accounts of the modern climate, geology, landforms and soils prepare us to come to grips with the modern biota. Then the primary content of the book follows, a series of 12 chapters on the key factors in the savanna ecology (water, nutrients, fire and herbivory) and the central processes, patterns and interactions of the ecosystem. Each chapter begins with a succinct statement of what will follow, and concludes with an excellent summary of what went before. Chaper 16, "An overview of savanna ecology", is a state-of-the-art review of the topic that every terrestrial ecologist, and certainly every teacher of ecology, will find indispensable, both as a concise summary of current concepts and a convenient entry into the burgeoning literature on the topic; the book includes about 400 references to the literature, many, of course, being the research papers and theses that resulted from the Nylsvley project. And Chapter 17 deals with the question dear to the hearts of the bureaucrats of the granting agencies - has the research led to any new or improved management, especially relevant since African savannas underpin two important economic industries - cattle ranching and tourism? The answer is presented with admirable honesty - successes and failures, but useful pointers to both scientists and administrators on the important and difficult topic of the effective transfer of scientific and technological information.

So I recommend this book enthusiastically for both its scientific value and its relevance to aspects of management - the management of ecosystems, and the management of 'big science' projects in ecology. Several books on savanna ecology have appeared in the past decade, but none can equal this one for clarity, comprehensiveness and balance, taking into account the differing purposes of the various books. Finally, for potential authors of scientific books, here is a superb example - in organization, writing style, illustrations and balance of material. It is a fine addition to the excellent Cambridge Studies in Applied Ecology and Resource Management.

J.C. Ritchie
Department of Botany, University of Toronto

Editor's note: This book may be obtained directly from: Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211.

Green Plants - Their Origin and Diversity. By Peter R. Bell. 1992. Dioscorides Press, Portland, OR. Prices: Hardbound - US$39.95, Paperbound - US$24.95 [plus S&H]

Peter Bell's **Green Plants - Their Origin and Diversity** is fundamentally a revised edition of Bell and Woodcock's **Diversity of Green Plants**, making a 26 1/2 x 18 1/2 cm book in paperback of 315 pages. It is illustrated throughout by line drawings and monochrome photographs. The choice of type and layout of the book make it easy to use.

In its nine chapters Bell passes through general considerations (one), algae (three chapters), bryophytes and tracheophytes (five chapters). In coverage of taxa the work is comprehensive (with some caveats, see below), with most of the anticipated taxa being dealt with in reasonable depth: - life history, characteristic physiology and ecology as well as form are routinely covered. Each group is also considered according to its possible origins and evolutionary diversification. The work is generally of high accuracy, well-organized and a useful reference. As befits a work of such lineage, errors, both factual and typographical, are very few. Moreover, the book is quite a useful length, unlike Scagel *et al.*'s **Plants - An Evolutionary Survey**, which I find too lengthy and detailed for my students.

However, **Green Plants - Their Origin and Diversity** is not a text that I can wholeheartedly recommend. In text and illustrations it is dull. The line drawings are clear but often inelegant. Scagel's aforementioned book is greatly to be preferred in this respect, while Linda Graham's **Origin of Land Plants**, though not nearly so comprehensive, is much more lively. The Plant Kingdom is a notoriously difficult subject to teach, particularly in this part of the world in the winter months, and Bell's book does not help by its plainness.

Subjects which are only briefly touched upon, if at all, that could be used to liven the subject, include the origin of Eukaryotes (the Prokaryote-Eukaryote distinction is very weakly stressed), the origins of sexuality, fossilization as evidence of past life, catastrophic events in earth history (e.g. the K-T cataclysm) and a deeper analysis of the problems of the terrestrial and sub-aerial mode of existence. To my mind, it is mandatory to divide the algae strongly from the photosynthetic bacteria, and, with the latter, to discuss the purple sulphur and non-sulphur bacteria in a course that purports to cover all plant-like organisms. Why these are omitted, in view of their crucial evolutionary significance, is difficult to say. Within the Gymnosperms the important groups Glossopteridales and Caytoniales are only discussed with the Angiosperms, and in a very indirect manner, as carpel precursors, when they have nothing to do with this. On the other hand, the pertinent but perplexing ***Sanmiguelia*** is not even mentioned with respect to carpel theory and Angiosperm origin. The evolutionary passages carry not a single cladogram, which is remarkable for a modern audience.

In summary, I can only give this book a qualified recommendation.

J.B. Phipps, University of Western Ontario

Editor's note: This book may be obtained directly from: Timber Press Inc., 9999 S.W. Wilshire, Portland, Oregon 97225.

FUTURE ANNUAL MEETINGS
PROCHAINES RÉUNIONS ANNUELLES

1995
University of Guelph, Ontario
with CSPP/avec la SCPV
(June 24-27 juin)

1996
University of Prince Edward Island,
Charlottetown, PEI
(June 23-27 juin)

1997
Université de Montréal (Institut botanique)
with/avec Botanical Society of America
(dates not yet known)

1998
Arrangements not yet finalized
Probably at University of Saskatchewan

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

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.

"Biological Dogma" Destroyed

This article appeared almost a year ago and was "left on the cutting room floor" in favour of other stories. I slip it in here because it is a general topic many may have missed. For many years it has been "biological dogma" that a sudden diversification of insects was related to the evolution of the Angiosperms about 125 million years (Ma) ago. Not so, according to Labandeira & Sepkoski in a 1993 article in *Science* which concluded that flowering plant evolution did not have a marked effect on insect diversity. Insects were, in fact, diversifying greatly 120 Ma before the appearance of fossil angiosperms. The earliest known insect fossil (a relative of silverfish) is from the Devonian (390 Ma), and insects had probably undergone a long period of evolution before this. Insect evolution really took off (sorry, folks ... I couldn't resist that) about 325 Ma when wings enabled insects to disperse widely into many different environments and ecological niches. The only serious disruption of the march of insect diversity was the end-of-Permian extinction (thought caused by widespread deforestation), when 65% of insect groups perished. A sharp rise of insect diversity followed the Permian extinction, probably the result of coevolution with plants such as ferns, cycads and conifers. The authors of this study imply that flowering plants took advantage of insect groups that had already evolved to utilize non-flowering plants. They note that the existing high insect diversity on the earth is not so much a result of high speciation rate, but of low extinction rate. For example, at the end-of-Cretaceous extinction (goodbye, dinosaurs!), 85% of Cretaceous insect families survived into the Tertiary. In other words, "Bugs endure".

J.N. Wilford, New York Times, August 3, 1993

Passive Smoke and Vitamin C Levels

An article in a recent issue of the *American Journal of Clinical Nutrition* notes that those who regularly inhale smoke wafting from nearby users of ***Nicotiana tabacum*** have below normal blood levels of vitamin C. The study suggests that passive smokers (and regular smokers, too) should join the "100 milligram club", by trying to take in at least 100 mg of vitamin C daily (e.g. 8 ounces of orange juice each morning). This article (written by Colleen Pierre, a Baltimore nutrition consultant) lists several important effects of vitamin C for humans, including: faster wound healing, stronger blood capillary walls to prevent blood leakage (e.g. the classic symptom of scurvy is bleeding gums), activation of folic acid, increased uptake of iron, and possible roles in reducing the risks of heart attacks and certain cancers.

Kitchener-Waterloo Record , February 25, 1994
[reprinted from the original in the Baltimore Sun]

Biodiversity Wins

Prairie grassland plots with more diverse vegetation (species-rich) are more resistant to environmental stresses such as drought and are more productive than plots with fewer species. These are the conclusions of a study by David Tilman (Minnesota) and John Downing (Montreal) recently published in *Nature*. According to Tilman, "This work leaves little doubt that biodiversity matters and that habitats with more species withstand stress better and recover faster. We should preserve biodiversity because it is nature's insurance policy against catastrophes. By sustaining biodiversity, we help sustain ourselves."

David Suzuki, Toronto Star, March 5, 1994

T is for Tea, and Twining, too.

During one of the few times I was let off the leash that keeps me slaving away at these Bulletins, I heard a radio interview with Sam Twining, the current person who holds the Royal Warrant for the supply of tea to the Queen. Twining's has supplied the monarch since 1837 (Queen Victoria). The company was started by Thomas Twining, who operated a tea house of some repute in London. It was frequented by several important figures of the day, including the painter, Hogarth, who ran up such a credit bill that he offered to pay it off (and did) by painting a portrait of Thomas Twining, which still hangs in the company's head office. Twining also made special tea blends for his aristocratic customers, the most famous of which was (and still is) the Earl Grey blend. Unfortunately, neither Grey nor Twining registered the name, and there are today several companies which produce an "Earl Grey" tea. However, according to Sam Twining, they are but a pale imitation of the original, which is made using a secret list of additives (the only one he would admit to using was oil of bergamot [from ***Citrus aurantiaca*** ssp. ***bergamia***]).

The quality of Twining's teas depends on the noses and taste buds of just seven tea tasters. You might think that this would be a very easy task, but it is quite an involved process. First they judge the aroma of the dried tea leaves (called "nosing" them). The leaves are wetted and again "nosed". Finally, the tea is made from the leaves and tasted (rather noisily slurped in to atomize it). Each taster makes 500-1000 slurps per day.

The various tea samples must then be blended and a new round of tastings done. According to Sam Twining, the best quality tea comes from slowly grown leaves during warm, dry weather. Twining's most prestigious (and most expensive) blend is "Casselton" [my closest phonetic spelling of what I heard on the radio], which is made from what are termed "second flush Darjeeling leaves". You and I will likely never drink this tea, since almost all of it goes to rich Japanese, who pay upwards of £58 for one pound of this marvelous tea.

The interviewer asked Mr. Twining about the origins of putting various things into tea. The use of milk in tea probably was copied from the Chinese. Adding lemon (or lime) juice originated with the British Navy, who found that it was a great way to get sailors to down their lemon or lime juice for prevention of scurvy. And don't ask about the addition of sugar, which Sam Twining found to be an absolutely vile thing to do to good tea.

The Gabereau Show, CBC Radio, March 25, 1994
[Sorry, I didn't catch the name of the male interviewer who was sitting in for Vicky Gabereau on this program]

More on Australian Bushfires

Our thanks to Susan Aiken of the Canadian Museum of Nature, who sent us this article from an Australian newspaper. In the wake of the severe January bushfires near Sydney, the New South Wales government is proposing to force regular prescribed burns in areas of fire-prone bush. However, Rob Whelan, University of Wollongong, is concerned that this policy could lead to the elimination of some of the native plants, especially those that take several years to recover fully from a bushfire. For some plants, such as ***Banksia ericifolia*** and sweet-scented wattle, the fire kills the plants and new plants must grow from seeds. The wattle produces mature plants in about 2-3 years and could survive burns at about 3-4 year intervals. For ***Banksia*** it could take up to 8 years for mature plants to grow and it could not survive long in any area with burning occurring at shorter intervals. Other plants survive a bushfire, but often take several years to recover and produce vigorous growth. Native grasses grow back almost immediately but grass trees (also called blackboys; ***Xanthorrhea***) need 2-3 years to recover, and trees such as scribbly gum (***Eucalyptus***) require 5 or more years for recovery. Frequent burning would again be detrimental to the long-term survival of these plants. It seems the politicians have neglected basic botany in their rush to appease the complaints of their constituents.

Sydney Morning Herald, March 24, 1994

More Endangered Plants

The latest update of the list of Canada's endangered animals and plants includes the following endangered plants: the round-leaved greenbriar and the deerberry (ON), the blunt-lobed woodsia (ON & QC), Van Bruntie's Jacobs ladder (QC), Long's bulrush and the redroot (NS).

Toronto Star, April 30, 1994

Toxic Algae are Prime Suspects

Thanks to Usher Posluszny for this clipping about suspected algal poisonings in the aquatic ecology lab at North Carolina State University (Usher noted that this story also appeared on CBC's As It Happens). Both researchers in the lab, JoAnn Burkholder and Howard Glasgow, have reported experiencing neurological symptoms which appear to be caused by toxic dinoflagellates they are studying (probably by breathing in aerosols coming from several 10 liter fish tanks). The worst effects were experienced by Glasgow, who developed severe memory problems, had sudden outbursts of rage, and, according to this article, "saw his reading comprehension plummet to match his 6-year-old daughter's". He took two months off from work and seems to have fully recovered. Needless to say, researchers in the lab now use specialized equipment to prevent inhalation of any of the organisms growing in the fish tanks. Part of their research is now devoted to proving the algae actually caused their symptoms.

Marla Cone [L.A. Times], Toronto Star, May 24, 1994

Those Blooming Algae!

A few days later the Star reprinted this article by the same L.A. Times reporter who wrote the story above. In true sensational newpaper fashion, the subheadline begins, "A resurgence of lethal slime ...", and the article text begins, "The attack of the phantom killers ...". Obviously getting more mileage out of her interviews with the North Carolina researchers, Marla Cone describes the recent increase in reports of algal blooms (green tides, red tides and brown tides) and of toxic algae, especially toxic dinoflagellates such as those mentioned above and toxic diatoms. These "phantom killers" are responsible for mass death of menhaden in a North Carolina estuary (JoAnn Burkholder's study area) and for the death of shellfish in Peconic Bay on Long Island, to mention just two instances. Nutrient enrichment of coastal bays and estuaries on both coasts often results in copious growth (blooms) of planktonic algae, causing environmental deterioration (such as oxygen depletion) which leads to declines in fish and shellfish populations. U.S. environmental groups are pushing politicians to strengthen the Clean Water Act to better control sewage discharge and agricultural runoff into waterways. As always, the debate will no doubt founder on the question of "Who-should-pay?", and nothing will be done.

Marla Cone [L.A. Times], Toronto Star, May 28, 1994

Beer Bellies Bash Colds

This is one story with which I can readily identify. A report from Chicago about a study which included both men and women says that "occasional beer drinkers are 30% less likely to catch a cold than non-drinkers". If you really like your booze, the study found that 2-a-day produced a 65% reduction and 3-a-day reduced cold catching by 85%. This study, of course, does not mention that although you will not be going to your bathroom for cold medicines, you will be going there for another purpose.

Kitchener-Waterloo Record, May 21, 1994

Flavr-Savr Tomato is a Hit

Calgene's genetically engineered Flavr-Savr tomato was approved for public sale in the U.S.A. recently, and the first ripe ones were for sale at the State Market in Davis, California, on our Victoria Day weekend [for $1.99 a pound, compared with $1.19 for ordinary tomatoes!]. Tourists and locals flocked to the market to photograph, buy and taste this biotech marvel. To produce this tomato cultivar, Calgene's researchers cloned the gene which initiates the rotting of the tomato flesh, and then reinserted a gene with the reverse sequence. This resulted in a tomato that can ripen on the vine and that will retain its flavour without going mushy during the several days it may take to reach distant markets.

Kitchener-Waterloo Record, May 24, 1994

Nicotine Benefits

According to reports in the *New England Journal of Medicine* and *The Medical Post*, nicotine (whether from cigarettes or from skin patches) is an effective treatment or preventative for ulcerative colitis, a common inflammatory bowel disease. Smokers who quit often develop the disease within the first two years of abstinence.

Marilyn Dunlop, Toronto Star, May 21, 1994

Green Tea Fights Cancer

Green tea reduces the incidence of esophageal cancer in mice and rats. "Big deal!", you say. Well, a recent study in the *Journal of the National Cancer Institute* concludes that green tea has the same effect in humans. Reductions of 57% for men and 60% for women were found in a study of Shanghai residents. The active ingredients are believed to be polyphenols which interfere with enzymes that produce carcinogenic substances.

Kitchener-Waterloo Record, June 1, 1994

Botanical Oddity

Botanists working on the 18,000 plant species to be included in **Flora Mesoamericana** have come up with a plant which will cause us all to revise "botanical dogma" about flower structure. ***Lacandonia schismatica***, a tiny, threadlike plant, is the only flowering plant that has stamens which are located INSIDE a ring of pistils! Another interesting plant they would like to collect again is ***Haptanthus hazlettii***, which is known only from a single specimen collected from an area of coastal Honduras in which, unfortunately, all of the original forest has been cut. This plant has separate male and female flowers but the extant specimen does not provide enough information for the familial affinities to be determined.

New York Times, May 3, 1994

Hedge-Huggers Unite in Oxford

The British press has played up the story of a 9-year-old schoolboy's fight to save an ancient Oxford hedgerow. James Silk was among several adults speaking out against a plan by Wolfson College to remove the 360 feet long by 25 feet high hedgerow to make room for a new cricket field and two football pitches. James is a natural history buff and he can see "lots of interesting plants, trees, birds and animals" from his bedroom window, which overlooks the hedgerow. He even tried a method described in the Oxford Children's Encyclopedia for measuring the age of the hedgerow and came up with a figure of 400 years. However, according to David Sturdy of the Ashmolean Museum, it can be traced back as a manorial boundary to 1086, and could be as much as 1400 years old. It is thought to mark the ancient Saxon boundary of Royal Headington. James Silk told those assembled at the Oxford Town Hall, "If we pull out our hedges there will be nothing for our children and grandchildren to enjoy. No one could ever replace a thousand years of history. I love my cricket, but I love the hedge more." The final decision by the County Council is pending.

Michael Hornsby, The Times of London, May 19 & 20, 1994

More Veggies, Please!

A daily dose of half a carrot or half a cup of spinach should provide enough vitamin A to reduce the risk of breast cancer. A study of 89,000 nurses published in *The New England Journal of Medicine* showed a 25% higher risk of breast cancer in those taking in fewer than 6,630 IU per day of Vitamin A [the recommended daily allowance is 5,000 IU]. Other good sources of this vitamin are leafy green vegetables, broccoli florets, sweet potato, and several orange-coloured fruits, such as pumpkin, squash, cantaloupe and apricots.

Guelph Mercury, May 4, 1994

Strawberry Quest Launched

"The rather watery, pale-fleshed fruit for which visitors to Wimbleton will pay through the nose this summer will almost certainly be Elsanta, a Dutch-bred variety that accounts for 60% of the strawberries grown in Britain," writes the author of this article. Modern strawberries certainly do not compare in colour and flavour with some long forgotten cultivars. This is why the Brogdale Horticultural Trust has launched (in a recent issue of *Country Life*) a nationwide search (in the U.K., that is) for some of these vanished varieties. High on the list are such names as: Sir Joseph Paxton, Kern's Imperial, King of the Earlies, Black Prince, British Queen, Laxton, Eleanor, Elton and Downton, which are among 128 varieties listed in the fruit manual of Robert Hogg (1877). The Trust wants to establish a gene bank of strawberries that could provide useful characters for future use by breeders or biotechnologists.

Michael Hornsby, The Times of London, May 12, 1994

Soybeans fight cancer

There are at least five compounds in soybeans which are known to inhibit colon, skin and other cancers in animal studies. One of the compounds is chemically similar to tamoxifen, a drug used to treat breast cancer.

Guelph Mercury, April 19, 1994

Garlic vs Bacteria

Here is more information on the beneficial effects of garlic, thanks to this submission by Joan Venn. A study by New England researchers published in the ***Pediatric Infectious Disease Journal*** found that freshly pressed garlic extract, even diluted to one part in 250, killed a variety of infectious microorganisms, including some drug-resistant strains of bacteria. The effective compound is probably allicin, the odour-producing chemical in garlic, which is already known to be an antibacterial agent. It remains to be seen whether this *in vitro* study will have any practical application in medicine.

New Scientist, May 14, 1994

Garlic vs Mosquitoes

According to this radio interview, eating garlic or oranges before you go into the outdoors will help you in keeping mosquitoes away. On the other hand, after eating bananas you will attract mosquitoes.

Later the Same Day, CBC Radio, June 1, 1994

Monkey Puzzle Woes

During my youth in Vancouver I was fascinated by the many monkey puzzle trees (***Araucaria araucana***) which are grown in several gardens. Wild monkey puzzle forests grow along the border of Chile and Argentina between latitudes 38° and 40° South and, according to this item submitted by Joan Venn, they are in serious trouble - so much so that they are now classified globally as "rare" on the Red Data List and also appear on the CITES list which bans international trade in any part of the tree. In Chile it is the logging companies which are largely to blame, since the monkey puzzle is a valuable timber tree. In 1976 Chile declared the tree a "national monument", but illegal felling continued and the timber industry was able to pressure the politicians to revoke the tree's protected status in 1987. This action caused an outcry from environmental groups which caused the government to reverse its position again in 1990. Now ... here is the sad part of this whole mess. A dispute over land ownership involving a logging company, a private owner and the government has meant that the Pehuenche Indians of the Quinquén Valley in central Chile face starvation. These Indians depend on the *piñones*, or monkey puzzle "pine nuts", which they collect and store as food for themselves and their animals (and sell to obtain money for purchasing supplies for the winter). In a normal year they would collect about 100,000 kg, but the government action (or is it inaction?) has excluded them from more than half of their traditional forest collecting area. This is a great example of the failure of politicians to fully consider the results of their decisions.

New Scientist, May 7, 1994

Kenya Problem

A somewhat similar situation to the above is faced by the Masai tribe concerning the Loita Forest in Kenya. The Kenyan government wants to declare the forest a nature reserve, but the Masai fear that there will be roads built which will bring a huge influx of tourists, similar to what has already happened with the Masai Mara Reserve. The Masai consider the forest to be a gift from their gods (indeed, the home of their gods) and they point out that they have guarded it and managed it for millenia. Legal action has been launched by the tribe to stop the government's action.

CNN News, July 7, 1994

Booby Prize

The "I-don't-really-know-my-Botany" prize goes this time to the script writer or interviewee who produced this sentence: "Earwigs do little damage to plants because they only eat the tender parts."

News Broadcast, CBC Radio, July 12, 1994

Tropical Trees Live Faster, Die Younger

This is the conclusion of a study of turnover rates in tropical forests recently published in *Science*. The researchers found that "both the death rate and the rate of addition of young trees in tropical forests around the world have increased markedly, especially since 1960". The increase in global carbon dioxide levels is the suspected cause (but this is essentially impossible to prove). A loss of diversity is feared because the increasing number of fallen trees and gaps in the forest will favour the growth of light-tolerant vines and trees, at the expense of shade-tolerant species (which could become extinct). This study also suggests that, since vines and fast-growing trees have less dense wood, the tropical forest may absorb less carbon dioxide, resulting in a further increase in global levels.

New Scientist, March 26, 1994
We thank Joan Venn for submitting this item.

Turmeric to the Rescue!

Research at the University of Mississippi published in *The Medical Post* has proven that turmeric, a curry spice, is effective in healing chronic leg ulcers. The research director grew up in India and knew that turmeric is used there to heal wounds (and that modern tests have shown it to have anti-inflammatory and antibacterial properties). For the leg ulcer treatment the turmeric was put into an ointment that was spread on the wound. The patients were also given a daily dose of milk or orange juice laced with turmeric ... sort of attacking the problem from both sides.

Marilyn Dunlop, Toronto Star, June 11, 1994

New R.D.A. for Calcium

A panel convened by the U.S. National Institutes of Health has recommended an increase in the RDA (recommended dietary allowance) of calcium by 200-300 mg per day. Currently the RDA ranges from 800 mg (most adults) to 1200 mg (children, young adults, and pregnant or nursing women). The biggest increase would be for women over 50 (to 1500 mg per day; to 1000 mg if on hormone replacement). Leafy vegetables are a good source of dietary calcium.

Kitchener-Waterloo Record, June 11, 1994

Philatelia Botanica

Here it is, all you collectors interested in botanically oriented stamp issues ... the return of our periodic stamp column.

This edition of the column is devoted to the new set issued by Canada Post on June 30, 1994, to commemorate Canada Day. This set is issued as a miniature pane comprising 12 stamps (4 across and 3 down; all 43 cent denomination) featuring various maples and a wide selvedge at the top showing a fanciful, sea-to-sea panorama of Canada. Of the 160 species of maples, this issue contains all of the 10 species which are native to various parts of Canada and a couple of interlopers. Here is a list of the stamps.

1. Mountain Maple (L'érable à épis) is presented in a maritime setting, with an iceberg to the left which looks like the top of an ice-cream cone. Known by many names, such as dwarf maple, low-moose maple, white maple or white wood, it is found from Saskatchewan to the Maritimes. Because of the beautiful red foliage it is often used as an ornamental tree. It is also a good anti-erosion species, with roots which grip solidly into slopes and river banks.

2. Manitoba Maple (L'érable négundo), also known as boxelder, resembles the ash trees in having compound leaves, but it has typical maple fruits. It grows from eastern Alberta to southern Ontario and is often used as an ornamental tree. A prairie background with a grain elevator is featured on the stamp.

3. Douglas Maple (L'érable nain) is also called Rocky Mountain or western mountain maple. It has a very hard, flexible wood, and has been used for making bows and arrows. It grows in B.C. and western Alberta. The stamp design puts it in a hilly setting beside a highway with a transport truck on it.

4. Striped Maple (L'érable de Pennsylvanie) has strange alternate names such as moosewood (deer and moose love the sprouting buds) and goosefootwood (leaf shape resembles you-know-what). It grows from the Great Lakes forest to the maritimes. On the stamp it overlooks a river spanned by a wooden covered bridge.

5. Sugar Maple (L'érable à sucre), also growing from the Great Lakes forest to the maritimes, is the source of a well-known topping for flapjacks and waffles. The stamp design has a small church at the right side in front of a distant sugarbush, probably representing an Ontario scene.

6. Vine Maple (L'érable circiné), is found only in the southern part of B.C. coastal forest. Its branches spread up to 10 metres, creating a vine-like effect. The design shows the tree with red leaves in front of a mountain landscape.

7. Bigleaf Maple ((L'érable grandifolié) is another B.C. species found in the southern coastal forest. A coastal scene with a fishing boat is on the stamp.

8. Silver Maple (L'érable argenté), also known as white maple or river maple, grows in southern Québec and Ontario, and in the southwestern part of New Brunswick. The stamp has a small church in the right background and could represent a scene from Québec.

9. Red Maple (L'érable rouge), shown on the stamp in a seashore setting with a lighthouse, has bark which can be boiled to obtain a brownish red dye. It grows in the Great Lakes-St. Lawrence-Acadian forest, as well as in parts of the boreal forest in Newfoundland.

10. Black Maple (L'érable noir) grows from the Montréal region westward to the Great Lakes forest. The stamp design is a southern Ontario farm scene with a barn at the right of the tree.

11. Hedge Maple (L'érable champêtre) is a decorative, ornamental tree and is grown for its leaves, which turn pale yellow in autumn. On the stamp background is a house on stilts over the edge of the water (probably a Nova Scotia scene).

12. Norway Maple (L'érable de Norvège) is, of course, a native of Norway, but is grown extensively in Canada as an ornamental tree. The stamp shows the tree in an urban setting.

I should note that this is not the only special maple stamp issue produced by Canada Post. In 1971 a 4-stamp set showed maple leaves or fruit in each of the 4 seasons. It is instructive to note that the denominations were 6 cents and 7 cents (!!). The autumn stamp provided one of Canada's rarest modern errors - all of the grey lettering is missing. There exist 75 imperforate pairs of the spring stamp.

Joe Gerrath, Editor & Philatelic Reporter

MEETINGS / CONGRÈS

Mycology Congress

Just in case anyone interested in fungi and lichens missed our previous listing in the August 1993 issue, this is a reminder about the **Fifth International Mycological Congress** at the University of B.C., **August 14-21, 1994**. Registration information can be obtained from: **IMC5 Secretariat, c/o Venue West Ltd., 645 - 375 Water Street, Vancouver, BC V6B 5C6.**

Fungal Modelling

Modelling of Filamentous Fungi is the title of a symposium to be held in Olocec, Slovenia, **September 15-17, 1994.** Information from: **Dr. M. Berovic, National Institute of Chemistry, Hajdrihova 19, 61115 Ljubljana, Slovenia. FAX: +386 61 125 7069.**

Spruce Forest Ecology

Kielder - The Ecology of a Spruce Forest is the title of a joint meeting of the British Ecological Society and the Institute of Chartered Foresters, to be held in Newcastle-upon-Tyne, U.K., **September 20-21, 1994.** Obtain further information from: **Dr. S.J. Petty, Forestry Authority, Wildlife Ecology Branch, Ardentinny, Dunoon, Argyll, U.K. PA23 8TS.**

Tree Biotech Symposium

The Second International Symposium on the Applications of Biotechnology to Tree Culture, Protection and Utilization will be held in Minneapolis, Minnesota, **October 2-6, 1994.** For information, contact: **Edith Franson, Executive Secretary, Tree Biotechnology Symposium, Forestry Sciences Laboratory, P.O. Box 898, Rhinelander, WI 54501. Telephone: (715) 362-7474 or (715) 362-7816.**

Ecology and Statistical Methods

An **International Conference on Ecology and Statistical Methods** will be held in Niort, France, **October 5-6, 1994.** Information from: **Dr. V. Bretagnolle, CEBC-CNRS, F-79360 Beauvoir sur Niort, France.**

Natural Areas Conference

Palm Beach Gardens, Florida, is the site for the **21st Annual Natural Areas Conference**, which is subtitled "Ecosystem Management and Restoration for the 21st Century", **October 19-22, 1994.** Information: **Bill Helfferich, South Florida Water Management District, Box 24680, West Palm Beach, FL 33416.**

Plant Biotech Course

A course with the title, **Molecular Markers for Plant Breeding and Plant Genetics**, will be given at the Cold Spring Harbor Laboratory, N.Y., **November 8-21, 1994.** For further details, contact: **Meetings Office, Cold Spring Harbor Laboratory, 1 Bungtown Road, Cold Spring Harbor, N.Y. 11724-2213.**

Seaweed Symposium

The XV International Seaweed Symposium will be at the Universidad Austral de Chile, Valdivia, **January 8-14, 1995.** The Symposium comprises plenary lectures, special sessions (mini-symposia), contributed papers, posters, workshops and field trips of interest to those working on the biology and utilization of economically important macro- and micro-algae and their products. If you wish to receive the Second Circular, contact: **The Secretariat, XV International Seaweed Symposium, Instituto de Botánica, Universidad Austral de Chile, Casilla 567, Valdivia, Chile; FAX: 56-63-212589 or 56-63-212953.**

Plant Cell Biology

This is the working title of the **5th International Botanical Microscopy Meeting**, sponsored by the Royal Microscopical Society and by Oxford Brookes University (Oxford's new university), at which the meeting will take place, **March 26-31, 1995.** The program planners are organizing the following sessions:

- ❑ Microtubule and cytoskeletal dynamics,
- ❑ Microscopy of living cells - ion imaging, cell-cell signals,
- ❑ Plant cell organization - cell walls, meiosis, low temperature techniques,
- ❑ Molecular mechanisms of plant development - cell cycle, floral development, and
- ❑ Plant-microbe interactions.

For further information, contact: **Miss Karen Hale, Royal Microscopical Society, 37/38 St. Clements, Oxford, OX4 1AJ, U.K.; Tel.: +44-865-248768; FAX: +44-865-791237; E-mail: rms@vax.ox.ac.uk.**

Population Ecology

The A.J. Nicholson Centenary Meeting on the Frontiers of Population Ecology will be in Canberra, Australia, **April 18-22, 1995.** Obtain further information from: **Mrs. L. Lawrence, CSIRO Division of Entomology, G.P.O. Box 1700, Canberra, A.C.T. 2601, Australia.**

Nitrogen Fixation Congress

The Tenth International Congress on Nitrogen Fixation will be in St. Petersburg, Russia, **May 28th to June 3rd, 1995.** The contact person for information is: **Igor A. Tikhonovich, Research Institute for Agricultural Microbiology, Podbelsky Shosse 3, St. Petersburg - Pushkin 8, 189620 Russia. [E-mail address: chief@riam.spb.su]**

CSSA Convention - 1995

The next biennial **National Convention of the Cactus and Succulent Society of America** will be in Tucson, Arizona, **June 19-23, 1995.** For information, contact: **Chuck Hanson, 3560 West Bilby Road, Tucson, AZ; Telephone: (602) 883-9404.**

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