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Editor / Rédaction:
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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

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FUTURE ANNUAL MEETINGS RÉUNIONS ANNUELLES

1992 - Truro, N.S. (July 5-9 juillet)
1993 - Iowa State University, Ames, IA
with AIBS (Aug. 23-Sept 3)
1994 - Calgary, Alberta
1995 - Saskatoon, Saskatchewan
1996 - Charlottetown, P.E.I.

EDITOR'S COMMENTS COMMENTAIRE DU RÉDACTEUR

It is a daunting task to take over from someone who has done such an excellent job as editor of the Bulletin. Many thanks to Usher Posluszny for all his help in transferring files and offering hints about getting started as the new editor. The move down the hallway here at Guelph has been smoothly accomplished and the "new régime" is firmly established. It has been a bit of a chore converting to a different computer system and to new software (more about this on the next page) and learning about all the extra duties I wasn't told about at the outset.

By now you are recovering from the shock of the redesigned title page. I hope that you like the new look (if not, I'm sure I will hear from you). The rest of the pages will look more familiar but you will notice several changes in layout. The Bulletin will still be printed on 100% recycled stock and by the same printer used by Usher.

This is your Bulletin and its quality as a means of communication depends largely on the contributions I get from members of CBA/ABC. The Bulletin will have just as voracious an appetite for news items as it did under the previous editorship. Keep the channels of communication fed by sending in your news items..

(continued on next page)

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J'adresse le même appel aux membres francophones de l'ABC. Le Bulletin a besoin de soumissions en français. Nous souhaitons particulièrement recevoir des nouvelles concernant vos travaux de recherches botaniques ainsi que les titres de thèse des étudiants qui ont obtenus leur M.Sc. ou Ph.D. Ce Bulletin vous appartient! Utilisez-le pour communiquer avec tous les autres membres de l'ABC. Faites parvenir vos contributions directement au rédacteur adjoint, section francophone, ou au rédacteur en chef.

Information about the Truro annual meeting is included with this mailing of the Bulletin. Consider attending, especially if you have any interest in the theme: Botany in Agriculture. I will be there with both Associate Editors to accept both bricks and bouquets.

Technical Details

For those who might be interested in how the Bulletin will be put together in the next few years, I provide the following details about our system.

The hardware to be used is an AMIGA 2000 (Commodore Business Machines) equipped with 68030 accelerator board, "super Agnus" chip providing 2 MB chip RAM, hard disk, 3 floppy drives and 5 MB FastRAM. An XT-compatible emulator card is installed, allowing importation of MS-DOS files in ASCII or in Wordperfect (4.x or 5.x) format from several standard disk types (5 1/4" DSDD, 3 1/2" DSDD or 3 1/2" DSHD).

The desktop publishing software used to design the pages of the Bulletin is the Canadian-developed Professional Page 2.0 (Gold Disk Inc., Mississauga, Ont.), a program which has been easy to learn and which provides several extra design features, such as the ability to rotate a box to provide the vertically aligned "BULLETIN" on the front page. There are two Compugraphic typefaces used: "Times" for most of the text (usually 10 point plain) and "Triumvirate" for headings and footers (10, 12 or 15 point bold). Completed pages are printed on a Texas Instruments Microlaser Plus Postscript laser printer and pasted into 11x17" format for printing by a local commercial printer. The use of this desktop publishing system should continue to keep the cost of designing and producing the Bulletin to a minimum.

Associate Editor (English)

I am pleased to announce that Jean M. Gerrath has agreed to continue as Associate Editor (English language). She will continue to obtain and edit our Book Reviews and to assist in writing and editing other text in English. Her knowledge of how the Bulletin was produced during the last three years will be most valuable to the new Editor.

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Rédacteur Adjoint (Section Francophone)

Il me fait grand plaisir d'annoncer que Christian R. Lacroix (Charlottetown) sera le rédacteur adjoint, section francophone. Ses responsabilités seront la traduction des textes anglais et la rédaction ou vérification des contributions en français.

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Reviews / Évaluations

I have inherited a number of books from the previous editor which need to be sent out for review. Nous avons aussi des publications en français que nous devons soumettre à l'évaluation. If you would like to serve as a book reviewer and can promise to submit your review quickly, send your name to the Editor, indicating your preferred areas of interest. Reviewers keep the book that they have reviewed.

Joe Gerrath, Editor / Rédacteur



Acknowledgements / Remerciements:

In the last issue (Vol. 24, No. 4) the photograph of the Science Fair winner was provided by Iain Taylor and the photographs of presentations at Edmonton were taken by Joe Gerrath and processed and printed by Jean Gerrath.

PRESIDENT'S MESSAGE

What effect will the recession (recently referred to by our financial experts as the depression) have on our Association? This is an important question for botanists in Canada. One of our major functions, and a central focus of our Association, has been the annual meeting, but what can we expect with the increasing cost of travel and the increasing scarcity of funding for travel. The vastness of Canada is not helping us to cope with this problem. When you see members from the other side of Canada at the meetings in Truro next summer, it should give you a good feeling, a feeling of being part of something that is important and that people care a lot about.

For an Association like ours to be successful it takes commitment; it always has, and it always will. This has not changed much. The recession will of course have an effect, but our future will be in the hands of our membership and directors, who, with a very strong commitment to botany in Canada, will make adjustments, changes and decisions that will enable us to survive. If we have that commitment, regardless of individual differences over specific issues (such as exist within any family), we will be a successful team.

What I mean to point out here is that we can be optimistic about the future of CBA/ABC. A major characteristic of our association has been, and is, committed members. We are a strong team that is not based on and governed by finances alone. Consequently we will not be as severely impacted by the recession as some other Canadian groups.

We had a very successful annual meeting this last year. It was well attended, had an outstanding scientific program and was greatly enjoyed. It served our goals of increasing communication among scientists, recognizing excellence in scientific research, providing a forum for student research, and promoting and improving the teaching of botany, and it served these goals excellently. While Randy Currah and his organizational team deserve a great deal of credit, actually all of you, including those who did not attend, contributed, some of you by simply being members. Part of the President's job is to thank the many people who serve the Association in one way or another, and I feel that I should thank all of you, on behalf of all of you.

Many years ago our Association was largely focussed on the annual meeting. Gradually we expanded our influence. This year we contributed to the successful

opposition to the transfer of 25% of NSERC's budget, we took part in a lobby, and we had a very busy science policy officer (Ernie Brodo) who enabled a botanical perspective on numerous science policy issues. These and many other cases of positive influence were made possible through our membership in the Canadian Federation of Biological Societies (CFBS), to whom we refused to pay a fee increase (based on our perception of its potentially damaging impact on membership). Although the best interests of CBA/ABC come first, we recognize that federal, provincial and university budgets are decreasing and that effective lobbying will be necessary if botany is to receive a fair share of what is left. This means membership in professional societies like CBA/ABC and CFBS that represent botanical interests.

During the past year our Conservation Committee responded to many issues relating to the protection and management of botanical resources in Canada. The various section chairpersons contributed to the development of research in various subdisciplines of botany. And you know many of the other things we do. They are no surprise because we did the same kind of things last year, but nevertheless there is a pattern of increase and improvement. Each year we do more and we do it better. Congratulations to all of you. Each one of you has played a role.

But what about need to worry. In all likelihood we would not have the CBA/ABC today if members had not worried about it in the past, so I encourage you to worry. Do a lot of worrying, but direct it to action. If energy for worrying is available it may as well be directed to something useful. One of the most positive things any of you can do is to bring our Association and its achievements to the attention of your colleagues and particularly to students. With more members we can go further, and the further we go the more we do for that science which has brought us a way of life. I would not be here today if someone had not taken the time to bring CBA/ABC to my attention. The message is simply this: We are doing very well and we have nothing to worry about, but (the inevitable "but") our future depends on the same kind of commitment that has been made by members in the past, and we could do more.

All the best to you in 1992, and hope to see you in Truro.

Paul M. Catling, President CBA/ABC

MESSAGE DU PRÉSIDENT

Quels effets aura la récession (que nos experts financiers qualifient de dépression) sur notre association? C'est une question primordiale pour les botanistes canadiens. Une des fonctions principales de notre association, un des points centraux, c'est la réunion annuelle. Mais que nous réserve l'avenir si on combine hausse des coûts de transport et diminution des allocations de voyage. Face à cette situation, la grandeur du Canada est un obstacle majeur. Lorsque vous verrez des membres de l'autre extrémité du Canada à la réunion de l'été prochain à Truro, vous devriez vous en réjouir; vous aurez l'impression que vous faites partie de quelque chose d'important et qui vous tient à coeur.

Le succès d'une association comme la nôtre dépend de notre engagement; il en a toujours été ainsi et il en sera toujours, rien n'a changé aujourd'hui. Bien sûr, la récession a ses effets, mais notre destinée est entre nos mains et celles de nos directeurs qui, en promouvant fermement la botanique canadienne, sauront apporter les ajustements et les changements requis, et prendre les décisions nécessaires à notre survie. Si nous nous impliquons, peu importe nos opinions sur des questions particulières (c'est comme ça dans chaque famille...), nous formerons une équipe gagnante.

Le point que j'aimerais souligner ici, c'est l'optimisme que nous pouvons entretenir face à l'avenir de l'ABC/CBA. Un trait marquant de notre association a toujours été l'implication de ses membres, et c'est encore le cas maintenant. Nous formons une équipe solide dont les bases et les visées dépassent les seules considérations financières. Ainsi nous ne nous attendons pas à être aussi sévèrement affectés par la récession que d'autres associations canadiennes.

L'an dernier, notre réunion annuelle fut un grand succès, avec une bonne assistance et un programme scientifique remarquable, apprécié de tous. Cette rencontre a parfaitement bien répondu à nos objectifs d'amélioration des échanges entre chercheurs, de reconnaissance de l'excellence de la recherche scientifique, d'ouverture aux travaux des chercheurs-étudiants et de promotion d'un meilleur enseignement de la botanique. Randy Currah et son équipe sont les grands responsables de cette réussite, sans oublier tous les autres membres, même ceux qui n'ont pu y assister. C'est une des fonctions de président que de remercier tous ceux qui se dévouent d'une façon ou d'une autre pour notre association. Un grand merci à tous!, en mon nom et au nom de tous.

Autrefois notre association était centrée principalement sur la rencontre annuelle, mais depuis nous avons graduellement diversifié notre influence. Au cours de cette année, nous avons contré le détournement de 25% du budget du CRSNG et nous avons participé à un lobby. Notre représentant en politique scientifique (Ernie Brodo) s'est sérieusement impliqué dans la promotion de la botanique dans le cadre de plusieurs politiques scientifiques. Ces interventions, et plusieurs autres, furent possibles grâce, entre autres, à notre affiliation à la Fédération canadienne des sociétés de biologie (FCSB), à qui nous avons même refusé de verser une hausse de cotisation de peur de nuire à notre membership. Même si les meilleurs intérêts de l'ABC/CBA passent en premier, nous devons admettre que les budgets fédéral, provinciaux et universitaires vont en décroissant et qu'il faudra un lobby très efficace pour que la botanique reçoive sa quote-part de ce qui reste. Cela nécessite la participation active à des associations professionnelles comme l'ABC/CBA et la FCSB qui défendent les intérêts de la botanique.

Au cours de la dernière année, notre Comité de la conservation a répondu à plusieurs demandes relatives à la protection et à la gestion des ressources botaniques au Canada. Les responsables des différentes sections ont contribué au développement de la recherche dans les différentes disciplines de la botanique. Vous connaissez l'ensemble de nos activités, elles se répètent d'une année à l'autre avec chaque fois une augmentation et une amélioration de nos performances. Chaque année nous en faisons davantage et nous le faisons mieux. Félicitations à vous tous, vous avez bien accompli votre tâche.

Y a-t-il lieu de s'inquiéter? Il est bien évident que l'ABC/CBA n'existerait pas aujourd'hui si ses membres ne s'en étaient pas préoccupé par le passé. Je vous invite donc à le faire encore maintenant. Formuler vos préoccupations et tournez-les vers l'action. Transformez vos inquiétudes en réalisations bénéfiques. Une des choses les plus utiles à accomplir serait de faire connaître notre association à vos collègues et en particulier aux étudiants. Un recrutement additionnel nous permettrait d'aller encore plus loin, et plus nous irons loin plus nous favoriserons cette science qui est notre raison de vivre. Je ne serais pas là où j'en suis aujourd'hui si quelqu'un ne m'avait pas fait connaître l'ABC/CBA. Mon message est simple: ce que nous accomplissons maintenant, c'est très bien et nous n'avons pas raison de nous inquiéter, mais (l'inévitable "mais") notre futur dépend de la même qualité

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Continuation

d'engagement que nos membres ont apportée dans le passé, et sur cet aspect nous pourrions en faire davantage.

Bon succès pour l'année 1992 et au plaisir de vous revoir à Truro.

Paul M. Catling, Président ABC/CBA

[Traduction de Jacques Cayouette]

GLOBAL CHANGE AND THE CANADIAN BOTANIST

IRWIN M. BRODO, CHAIR, SCIENCE POLICY COMMITTEE

As part of the activities of last year's CBA/ABC Science Policy Committee, a document entitled *A Proposal for a Canadian Long-Term Ecological Research Program (CLERP)* was reviewed and comments forwarded to the Canadian Federation of Biological Societies (CFBS) which solicited it. The proposal, a multiyear, multidisciplinary, expensive project, was being considered as a biological component of the **Canadian Global Change Program (CGCP)**. I was asked to represent the CFBS at a meeting with the CGCP in Saskatoon on October 20th with the aim of ironing out the details of a collaboration. I was, of course, representing the CBA/ABC at the same time.

I remained in Saskatoon for the two day conference on "**Sustaining Land Use: The Challenges of Global Change for Western Canada**" because CBA/ABC through its Science Policy Committee has been asked to respond to problems in this area as well. The conference represented the 1991 assembly of the Global Change Program and was coordinated by the Royal Society of Canada.

Much of the Global Change conference itself was devoted to questions related to agriculture, especially prairie agriculture, and few workshops or speakers really came to grips with the idea of "sustaining land use" other than to mention the generally accepted

notions of contour plowing and the like. Interesting examples of the documentation of climatic change were presented as demonstrations of computer technology. Of most interest to me as a botanist were the reports of long term monitoring of natural sites in different parts of Canada. This related directly to the *CLERP* proposal, which is what brought me to Saskatoon in the first place.

Is *CLERP* a good proposal? There are many reasons to believe that a coordinated effort at gathering crucial baseline and analytical data on Canada's ecosystems is worthwhile and timely. *CLERP* proposes to do just that. It would establish a means to promote and gather the results of systematic and ecological research on a series of representative areas across the country. Some data-gathering projects are already well-underway, and the proposal would make no attempt to duplicate or regulate these efforts. It would concentrate on disseminating the results of those studies to as large an audience as possible, and would make the data more accessible. In order to fine-tune the proposal and bring it up-to-date, a fact-finding tour of research centres in Canada was planned to give potential researchers and users a chance to express their views on exactly what is needed and what resources (human and material) are available to get the job done. At this stage of the development of the proposal, it is imperative that Canadian botanists make themselves available for consultation and ultimately get involved in the project itself.

At the Saskatoon meeting, it became clear that the Global Change Program does not have the funds for continuing to support the organizational phase of *CLERP*. Dr. Ian Smith of Agriculture Canada, working with Dr. Clément Gauthier of CFBS, is trying to find other sources of funding. I have been asked to participate in a rewriting of the draft proposal, and to be involved in discussing funding sources and possible interactions with federal departments that might be involved as "users". Thus, the CBA/ABC will have direct input in this major initiative. A number of Association members and several interested committees have already contributed their views on the initial proposal, and these comments will help to guide me in these deliberations.

*Irwin M. Brodo,
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LIONEL CINQ-MARS COMPETITION

Each year the Canadian Botanical Association gives an award for the best student paper presented at the annual CBA/ABC meeting. The award is made in memory of Lionel Cinq-Mars, a founding member of the Association and a widely admired teacher.

Any bona fide student enrolled at a Canadian institution of higher learning is eligible. The paper can be given at any session of the meeting. Every effort will be made to ensure that each student in the competition has a fair adjudication and an equal chance at the award.

Papers will be evaluated by a panel of judges (at least one from each of the CBA/ABC sections) which is chaired by the President-Elect. The merit of each paper will be judged on the basis of content (60%) (originality, technical expertise, associated subject knowledge) and presentation (40%) (lucidity, organization, use of visual aids, audibility and "presence").

The Cinq-Mars Competition is an important part of each annual meeting. We hope that there will be many participants and that the students will benefit, both from the experience of giving an oral presentation and from the comments each will receive on their paper from the panel of judges.

Please note that only those students who clearly indicate on their abstract title form that they wish to enter the Cinq-Mars Competition will be placed on the list of participants.

Usher Posluszny, President-Elect

JOHN MACOUN TRAVEL BURSARY

Student members of CBA/ABC who participate in the Lionel Cinq-Mars Competition are eligible to apply for the John Macoun Travel Bursary. This bursary, given in memory of one of the founders of Canadian botany, is a cash award which will aid the student in paying a portion of the cost of travel to the annual meeting.

Students intending to participate in the Cinq-Mars competition are urged to apply for this bursary by circling the bursary name on the form which must accompany the abstract.

COMPÉTITION LIONEL CINQ-MARS

Chaque année l'association canadienne de botanique décerne un prix pour la meilleure communication orale présentée par un étudiant lors de la rencontre annuelle de l'ABC/CBA. La récompense est remise à la mémoire de Lionel Cinq-Mars, un des membres fondateurs de l'association et un professeur fort admiré.

Tout étudiant inscrit à une institution canadienne d'études supérieures est éligible. Étant donnée que la communication peut être présentée à n'importe quelle session de la rencontre. Un effort sera fait afin d'assurer à chaque étudiant de pouvoir compter sur une chance égale pour l'obtention de ce prix.

La décision finale sera rendue par jury de membres (au moins un membre de chaque section de l'ABC/CBA) dirigé par le président élu. La qualité de la communication est jugée selon le contenu (60%) (originalité, techniques, connaissance du sujet) et la présentation (40%) (lucidité, organisation, utilisation de l'audiovisuel, clarté du texte).

Le prix Cinq-Mars est une partie importante de chaque rencontre annuelle. Nous comptons sur une forte participation et nous espérons que les étudiants bénéficieront autant de l'expérience acquise à communiquer oralement que des commentaires qu'ils recevront de la part des membres du jury.

Veuillez prendre note que seuls les étudiants qui ont clairement indiqué sur le formulaire de titre de résumé leur intention de participer au concours seront inscrit sur la liste des participants à la compétition.

Usher Posluszny, Président élu

BOURSE DE VOYAGE JOHN MACOUN

Tout étudiant membre de l'ABC/CBA qui participe à la compétition Cinq-Mars est éligible pour la Bourse de Voyage John Macoun. Cette bourse, à la mémoire d'un des fondateurs de la botanique canadienne, est une somme monétaire destinée à couvrir une partie des frais de voyage à la rencontre annuelle.

Les étudiants qui indiquent leur intention de participer à la compétition Cinq-Mars sont priés d'encrer également le nom de cette bourse sur le formulaire qui doit accompagner le résumé.

Recent Graduates

McGill University - Dept. of Biology

M.Sc.

Hill, Kathryn. "Characterization of the KRE2 gene in *Saccharomyces cerevisiae*." Supervisor: H. Bussey.

Pysznik, Andrew. "Functional organization of the chloroplast in the diatom *Phaeodactylum tricorutum*." Supervisor: S. Gibbs.

Zhao, Ping. "Effects of *mus* mutations on mitotic crossing over and gene conversion in *Aspergillus nidulans*." Supervisor: E. Kafer.

Ph.D.

Castillo Ruiz, Priscilla. "Plant activation of different chemicals by tobacco and *Brassica* cell cultures using the plant/microbe co-incubation assay." Supervisor: W. Grant.

Cooper, Anthony. "Characterization of the KEX1-encoded processing carboxypeptidase of *Saccharomyces cerevisiae*." Supervisor: H. Bussey

Ketchum, Karen. "A calcium-dependent potassium channel in corn (*Zea mays*) suspension cells." Supervisor: R. Poole.

Zhu, Hong. "The structure and function of yeast K1 toxin." Supervisor: H. Bussey.

Contributor: Christian Lacroix

University of New Brunswick - Forestry

Masters Degrees

Alkan, S. [M.Sc.F.E.] "Variation of some properties of a plantation-grown red pine." Supervisor: I. Smith.

Baskent, E. [M.Sc.F.] "Spatial wood-supply modeling: concept and practice." Supervisor: G.A. Jordan.

Cruikshank, J. [M.Sc.F.] "Genetic variation of black spruce seedlings in response to different forms of aluminum phosphate." Supervisor: H.H. Krause.

Dong, H. [M.Sc.F.] "Effects of forest floor disturbance on seed banks, germination and early survival of woody species after clearcutting of northern tolerant hardwoods in central New Brunswick." Supervisor: M.R. Roberts.

Innes, T. [M.F.] "Climatic change and dendroclimatology in Canada: A maritime perspective." Supervisor: R.B.B. Dickson.

Kaya, F. [M.Sc.F.E.] "Variation in some properties and effect of moisture on clear wood from a red pine." Supervisor: I. Smith.

Serrem, C. [M.Sc.F.] "Variation among black spruce clones in nutrient uptake and early growth after field planting." Supervisor: H.H. Krause.

Ph.D.

Johnson, J.A. "A study of several aspects of the associations between endophytic fungi and conifers." Supervisor: N.J. Whitney.

Contributor: Christian Lacroix

ANCIENT BONSAI STRIKES AGAIN!

The hilarious April-fool story of the 3600 year old bonsai discovered in an ancient Chinese tomb has resurfaced. In a December amateur gardening column in the Kitchener-Waterloo Record this story was included without any indication that the columnist knew it was a hoax. He described the story of the discovery of the tree and of the ingenious provision of drip irrigation for the tree while in the tomb. Anyone with a minimal knowledge of botany might have smelled a rat when it was revealed that the tree was still alive after so long in the tomb and that it began to grow when removed from the tomb and placed in the light. The new growth, the story goes, was white instead of being green and scientists were considering whether the plant should be given a transfusion of chlorophyll (!!). The original story, from the Australian **Bonsai Down Under**, ends with a reference to the April 1, 1984 issue of a Chinese antiquities journal, a detail which was omitted from the gardening column. To our knowledge nobody has written to the K-W Record to challenge the validity of the story. One might regard this as an indication of the level of botanical knowledge in the general public, of the faith people put in items they see in newspaper columns, or of the number of persons who actually read this gardening column.

REVIEWS / ÉVALUATIONS

'Plant Form' by Adrian D. Bell, Oxford University Press, 1991.

This superb book of 341 pages and numerous photographs and line drawings succeeds in bringing together in one place the enormous number of terms applied to the morphology of flowering plant organs and structures in a meaningful and interesting manner. Most of the photomicrographs are unique and of excellent quality. The line drawings are accurate and aid considerably in the interpretation of structures. It might have been useful to put each term in italics when first used or to have included a glossary of terms.

One of the strong points of the book is the interpretation of morphology in terms of development; this is particularly evident in the discussion of meristem position, meristem potential, meristem activity and meristem disruption. Morphologists will also appreciate the separate treatment of grasses, sedges and orchids since the terminology used for these groups is often very specialized.

The author does a commendable job of covering all aspects of flowering plant morphology, including examples from many geographical areas, and concludes the book with an excellent treatment of plant branch construction, an area that is receiving increased interest from plant morphologists.

The book will be of interest to the serious student of plant morphology as well as those interested in Botany, Horticulture and related plant sciences.

I was fascinated by this book from beginning to end, and congratulate the author for such a significant contribution to the botanical literature.

Dr. R.L. Peterson, F.R.S.C., Dept. of Botany, University of Guelph

Annual Review of Ecology and Systematics, Volume 21 (1990). Annual Reviews Inc., Palo Alto, CA

I like all of the Annual Review series. As one who has at various times had to teach about a wide range of organisms (from algae to vascular plants and from protozoa to crustaceans and insects) I have found these

collections of review articles to be an excellent source of up-to-date information on many plant and animal topics. The bibliographies are especially valuable because they provide access to the literature used for each review.

This volume of the Ecology and Systematics series contains a number of reviews which are of interest to various CBA/ABC members. Ecologists should all read James & McCulloch's review of the pros and cons of multivariate analysis (they point out that it is often inappropriately used) and Rohlf's article on morphometrics.

There is also an excellent review of the effects of rising carbon dioxide levels on natural ecosystems, including various kinds of plants and soil microorganisms. Botanists interested in plant-fungal and plant-pollinator interactions are served and there is a review about various aspects of storage materials in plants.

Several other reviews, although lacking any interest for botanists directly, can be read for pleasure and to broaden one's general knowledge. Those that I found especially interesting were John Maynard Smith's "The Evolution of Prokaryotes: Does Sex Matter" and D.H. Erwin's "The End-Permian Mass Extinction", as well as reviews on primate evolution and spider webs.

This volume continues the tradition of excellence established by this series over the past two decades.

J.F. Gerrath, Dept. of Botany, University of Guelph



Philatelia Botanica

Three of the new Canadian definitive stamp series depict fruit trees. The 48-cent stamp for mail to the U.S.A. shows a McIntosh apple, the 65-cent stamp (secondary domestic value) shows the black walnut and the 84-cent stamp for international mail shows the Stanley plum. Each design has a huge fruit in the background, with the foreground occupied by a tree and an enlarged flower or inflorescence.

Uganda recently issued a set of four stamps illustrating native mushrooms. Species depicted are: *Marasmius arborescens*, *Marasmiellus subcinereus*, *Agaricus campestris* and *Chlorophyllum molybdites*.

Contributor: J.F. Gerrath

FEDERAL ELECTIONS IN 1992

In the coming federal elections, expected some time in 1992, there will be a need to find out, and publicize, the positions taken by various candidates with regard to funding basic and applied research in Canada and, in more general terms, to find out where candidates stand vis-à-vis biological sciences and their impact on society. To this end, the Canadian Federation of Biological Societies (CFBS) is seeking to set up a network of representatives across Canada, especially within the universities, to participate in questioning candidates on these issues, and to bring up relevant issues at public meetings, one-on-one interviews, etc. The CFBS is preparing an information kit for such "representatives" to help them focus on certain issues and give them background information.

The Science Policy Committee of the CBA/ABC agrees that this is an important initiative, and that we should provide the CFBS with the names of interested members who are willing to participate in this Election-1992 program. In fact, this organization can, and should, add certain questions to any list provided by the CFBS - issues specific to botany. Are the candidates aware of problems associated with inadequate support of botanical (and other biological) research? What are their priorities? What is their view regarding possible solutions? We need volunteers to ask these questions. We are therefore requesting the names, addresses, affiliations, etc. of CBA/ABC members to forward to the CFBS.

If you would like to be involved, please send your name to the science policy chairperson as soon as possible.

*Dr. I. M. Brodo
Chair - Science Policy Committee
Canadian Museum of Nature
Botany Division
P.O. Box 3443, Station D.
Ottawa ON K1P 6P4*

Ameriflora '92

As part of the celebrations of the Columbus Quincentennial in the U.S.A., the city of Columbus, Ohio, is hosting a floral exhibition, **Ameriflora '92**, which will last about six months, from **April 20 to October 12, 1992**. The exhibition opens with a two-week floral and garden design competition (Apr. 20-May 3). There will obviously be many other things designed to part you from your money - various entertainers, restaurants, boutiques, etc. To obtain information on the exhibition and on accommodations, contact: **Ameriflora '92, 1995 East Broad St., Columbus, OH 43209-1679** or telephone: **(614) 645-1992**.



Floriade 1992

Every 10 years the Dutch horticultural industry has a World Horticultural Exhibition, and this is the year for it. On a 70 hectare site at Zoetermeer, near The Hague, **Floriade 1992** will be held from April 15 to October 11. This exhibition concentrates on seven main themes of interest to the horticultural professional: trade, transport, distribution, production, energy, environment and science and technology. There will, of course, be many attractions for tourists, with floral displays in outdoor gardens (3 million bulbs!) and in various greenhouses. Information: **Netherlands Flowerbulb Information Centre, 78 Kingston Road, Toronto, Ont., M4L 1S6** or telephone: **(416) 690-3213**.



Course Offered / Cours offert

Microinjection Techniques in Cell Biology

This course is offered at the **Marine Biological Laboratory, Woods Hole, MA, May 26-June 1, 1992** and is limited to 24 participants. It is a research-oriented course intended for graduate students and postdoctoral researchers. The course comprises lectures, demonstrations and individual laboratory exercises. Participants will learn to microinject single cells from a wide range of animals and plants. The deadline for applications is **March 20, 1992**. For further information and application forms, contact: **Florence Dwane, Admissions Coordinator, Marine Biological Laboratory, Woods Hole, MA 02543**, or telephone: **(508) 548-3705, Ext. 216**.



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 newspapers 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.



Sudbury Greening

CBA/ABC member (and the 1991 Mary Elliott award winner) Keith Winterhalder was profiled in a Canadian Press item written by Ian Bradley which appeared in the Kitchener-Waterloo Record (Dec. 14, 1991) and may have been published in other newspapers. The three-column spread, entitled "Sudbury spruce-up will take years" describes Keith's involvement in the current "greening of Sudbury". The article includes a photo of a very distinguished-looking researcher behind pots containing what appear to be *Coleus* and an unidentified succulent (does this mean that Sudbury is in a banana belt?)



Racist Plant Names

Lawson medalist Don Britton submitted this item by Stephen Strauss, science columnist for the Toronto Globe & Mail (Dec. 21, 1991). This article is based on one in The Scientist by Marvin Hunter describing plants with common names which have a racist connotation. In particular, Strauss mentions *Eriophorum vaginatur* ("niggerhead") from the Canadian arctic and *Pinus sabiniana* ("digger pine", named for the Digger Indian tribe of California) and sets up a contest "to rename Canada's contribution to racism - the infamous niggerhead - or to come up with another way of describing the digger pine". Don Britton gleefully brandished his copy of *Handbook of Conifers* and

pointed to the plethora of common names that already exist for *Pinus sabiniana*. He also could not find the "infamous niggerhead" in any of the modern Canadian floras (Hunter found it in a 1959 publication from Oxford University Press). The common names used now for *Eriophorum vaginatum* are "cotton grass" or "hare's tail". Incidentally, Strauss chose "niggardhead" as his winner for a replacement common name (not a very creative choice, is it?).



Killer *Caulerpa*

Steve Newman's column *Earthweek: A Diary of the Planet* (Globe & Mail, Dec. 21, 1991) notes the invasion of the coast of the Riviera by an alien green alga, *Caulerpa taxifolia*. Large growths of the alga, which probably was transported from the Caribbean or the Indian Ocean in the ballast of freighters, are crowding out the indigenous flora and fauna. Your editor, a phycologist, notes that there is an increasing problem of alien algal introductions. Toxic dinoflagellates are known to have been transported from Japan to eastern Australia in the ballast water of freighters and *Sargassum muticum* from Japan was probably introduced to British coastal areas in a similar way. There have also been experimental trials aimed at growing commercially valuable alien kelps, such as *Macrocystis* and *Undaria*, on the coast of France, seemingly without regard to the possibility of immense damage to local ecosystems.



Loose Juice

The medical column of the Toronto Star (Dec. 21, 1991) notes that Israeli scientists have found that cranberry and blueberry juice both contain a compound which prevents *E. coli* from attaching to the surface of the bladder. Drinking these juices, therefore, should help to prevent urinary tract infections, because the bacteria are easily flushed out with the urine. Grapefruit, mango and pineapple, which were also tested, do not have the active compound.

Continued on next page

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High-Tech Weed Killer

A Canadian Press story (Globe & Mail, Dec. 21, 1991) describes the Australian-designed "Detectspray", a high-tech device which analyzes reflected light from crop and weed plants to detect which are the weeds. Squirts of herbicide are then aimed only at the weeds, reducing both herbicide costs and environmental damage. The gadget is expensive but it probably will be coming soon to a farm near you.



Flowering Plant ?

In her gardening column (Globe & Mail, Dec 21, 1992) describing how to get a Christmas poinsettia to flower again, Marjorie Harris, the author of *The Canadian Gardener*, makes the following gaffe: "The bracts (poinsettias don't have flowers) will change from green to their original Yuletide colours...". Oops! Better luck next year, Marjorie.



Foodaceuticals

This term appeared in a Canadian Press item (K-W Record, Jan. 2, 1992) and refers to the current trend to eat plants such as garlic, broccoli and carrots for their medicinal or health benefits rather than just as foods. This trend is said to be related to the current increase in vegetarianism.



Hairy Spuds

The farm page of the K-W Record (Jan. 6, 1992) printed an article from the Los Angeles Times Syndicate which describes research at the International Potato Centre (C.I.P.) in Peru. This research centre, founded in 1971, has a "genetic bank" containing about 1500 wild and 3500 domesticated potato varieties. Some of the wild potatoes have glandular trichomes and these have been used to breed a new hybrid "hairy" potato variety. This new hybrid keeps most pests, such as aphids and various beetles or bugs, from eating the plant (they get stuck on the goo-tipped hairs). Even the Colorado potato beetle has trouble with the "hairy spud". Other potato varieties have red or purple flesh

and were used by the Andean people as dyes for cloth. Of the many wild and domesticated varieties of potato still eaten in Peru, the one most in demand in the markets for its tastiness has a deep yellow flesh.



Super Sage

This "quick fact" appeared in the K-W Record (Jan. 4, 1992). The once despised sagebrush is now regarded as a useful winter food plant for wildlife and for domestic sheep. Researchers of the U.S. Forest Service at Ogden, Utah, are trying to breed a "super" sagebrush. They hope that the new hybrids will grow faster, grow to a larger size and be more resistant to both drought and fire.



Forest Fires Good

Foresters Prescribe Fire for Healthy Trees is the headline of a short item by Jeff Barnard of Associated Press (K-W Record, Jan. 4, 1992). Despite the publicity associated with the huge forest fires that swept through Yellowstone National Park in 1988, the U.S. Forest Service still plans to maintain the current policy of letting lightning fires burn (as long as no people or properties are threatened). The old tradition of fighting forest fires, which normally would affect any area every 10 to 20 years, is blamed for the current outbreaks of budworm in Douglas fir forests in Oregon. It is hoped that allowing fires to burn and regarding them as a natural periodic feature of forest ecosystems will gradually produce healthier forests which will be less prone to disease and insect attack.



Wild Oats among the Daisies ?

Gary Larson's cartoon, *The Far Side*, often has subjects with a biological orientation. In a recent one with a botanical theme, he has drawn three somewhat daisy-like plants in a flower bed beside a fence. In the background the supposed male plant is reading a newspaper (the "Ptunia Ptimes"). In the foreground are two female plants with their (flower) heads together, obviously discussing the male. The caption below the cartoon reads, "I don't have any hard evidence, Connie - but my intuition tells me that Ed's been cross-pollinating."

SECTION NEWS:

Survey of Systematics in Canada, 1990

*J.B. Phipps, Dept. of Plant Sciences,
University of Western Ontario*

At the request of the Systematics and Phytogeography Section, I drew up and circulated a questionnaire on systematics on behalf of the committee struck to do so: C.C. Chinappa, L. Brouillet, T.C. Wells and myself. The questionnaire generated 25 responses, 12 from university scientists and 13 from government scientists. I estimate that there are about 40 university-based and 25 government systematists in Canada. If so, the response rate was about 40%, considered fairly good for a survey of this kind. The questionnaire was distributed to all members of CBA, there being no list of Canadian systematists as such. It was hoped that persons other than systematists, especially persons in administrative positions, would respond to pertinent questions - however, the questionnaire was not successful in eliciting any responses of this kind.

Ninety-six questions were posed under the following heads: profile of respondent (university or gov't scientist, rank, responsibility, years to retirement, profile of dept. in which they worked); group of organisms worked with; kind of systematics done (e.g. biosystematic, floristic); approaches used (e.g. herbarium, DNA etc.); size of support facilities (herbarium, library, laboratory); views on the climate

for systematics at their institution (incl. funding, replacement potential); importance of various subdisciplines in training new systematists; special needs (e.g. technical help, equipment, library, etc.); best environment for training plant systematists (e.g. biology; plant sciences/botany; ecology/evolution, etc) and comparisons with other countries. Mean and standard deviations (where meaningful) were calculated for three groups: university scientists, government scientists and both (pooled). I present some of the salient results in Table 1. Note that only the pooled responses are given here unless the replies were significantly different. The complete analysis is available from the writer on request.

Some of the more interesting features of the answers were the wide range of disciplines used (q 20-27) and needed (q 54-62), the relatively poor climate for systematics in their unit (q 47), the strong need for herbarium and other technical assistance (q 64, 69) and, even more, for fieldwork (q 80). Respondants clearly thought that biology departments were not good environments for training plant systematists (q 83-85). Likewise, few thought the academic structure irrelevant (q 86). There was virtually universal consensus (q 92) that there was plenty of work for systematists to do. The wording of the questions (q 93-96) comparing other countries was clearly not understood by respondents. The answers to q 93-96 are, therefore, suspect in this sense and also, perhaps, due to imperfect knowledge, although there was a clear instruction not to reply if uncertain.

Table 1. Selected questionnaire answers.

Question (q #)	Univ.	Gov't	Pool
Organisms worked with:			
higher plants (12)			19
fungi (15)			6
Kind of systematics (16-19)			predom. biosystematic
Approaches used (1=mainly; 2=not)			
herbarium (20)			1.29
multivariate stats (21)			1.55
cytology/karyology (22)			1.69
breeding systems (23)			1.73
biochemistry (24)			1.90
isozymes (25)			1.74
nucleic acids (26)			1.88
ultrastructure (27)			1.71

Continued on next page

Table 1: (continued from previous page)

Question (q #)	Univ.	Gov't	Pool
Facilities:			
library, cf. own institution (29)			very good
library, cf. international standards (30)			good
res. lab., cf. own institution (31)			good
res. lab., cf. international standards (32)			poor
herbarium resources, cf. international standards (33, 34)			good
growth facilities, international standards (35)	very good	good	
research lab., size, square meters (36)	42	53	
herbarium size, specimens (38)	108,000	258,000	
institutional help, hrs/wk herb. (39)	17	19	
institutional help, hrs/wk labs (40)	0	10	
Climate / Funding:			
if retire, will systematist replace (47)	70% yes	60% yes	
personal operating research funds, mean (48)	26,000	18,000	
Subdiscipline important in training new systematists (10=top; 1=bottom)			
biblio. & herb. (54)	7.2	7.9	
MVA & computing (55)	7.4	7.2	
cladistics (56)	6.3	5.9	
cytology (57)	6.5	5.6	
breeding systems (58)	6.1	6.1	
biochemistry (secondary compounds) (59)	5.0	5.3	
isozymes (60)	6.5	6.7	
nucleic acids (61)	5.7	6.2	
ultrastructure (62)	4.6	5.7	
Most significant shortages in support (1=serious; 2=insignificant) - mean values			
technical assistance (64)			1.25
research associates (65)			1.45
herbarium assistance (69)			1.475
support for fieldwork (80)			1.25
Best environment to train plant systematists (1=yes; 3=no)			
Plant Science/Botany Dept. (83)	1.45	1.68	
Biology Dept. (84)	2.42	2.43	
Population Biology/Evolution Dept. (85)	1.50	1.91	
irrelevant (86)	2.75	2.43	
Views on global funding shortfalls (1=desirable policy; 3=undesirable policy)			
greater polarisation have/have not individuals (89)	2.3	2.2	
more effective sharing of resources (90)	1.3	1.4	
restructure universities (e.g. some more Pop. Biol., others more Molec. Biol.) (91)	1.75	2.08	
Sufficiency of problems for systematists (1=yes; 2=no) (92)			
	1.0	1.08	
Comparisons with other countries			
Is systematics better off in: USA (93)			yes, somewhat
UK (94)			yes, slightly
France (95)			no
Australia (96)			no

POSITION AVAILABLE:

Memorial University of Newfoundland

Plant Ecologist

Applications are invited for a tenure track position at the Assistant Professor level in the Department of Biology commencing in September 1992. We are seeking a higher plant ecologist with interest in terrestrial or wetland areas within a boreal environment. The successful candidate will be expected to develop a strong research programme, seek and secure external funding, supervise graduate students and teach courses at the undergraduate and graduate levels. Candidates must have a Ph.D. and preferably post-doctoral experience. Applications, including curriculum vitae, statement of research directions, the names and addresses of three references, and copies of representative publications should be sent to:

Dr. R. Sheath
Head, Department of Biology
Memorial University of Newfoundland
St. John's, Newfoundland
Canada A1B 3X9

Screening of applications will begin on March 1, 1992. In accordance with Canadian immigration requirements, this advertisement is directed towards Canadian citizens and permanent residents of Canada. Memorial University is committed to employment equity.

MEETINGS / RENCONTRES:

Symposium on Plant Structure

The Katherine Esau International Symposium on Plant Structure will be held at the University of California, Davis, March 28-31, 1992. Symposium speakers, contributed papers and posters will focus on plant structure and development and on the application of newer methods in the study of organismal plant biology. For registration information: Vito S. Polito, Chair, Katherine Esau Symposium Committee, Division of Biological Sciences, University of California, Davis, CA 95616.

Primula Worldwide

An international symposium on the genus *Primula* will be held April 10-12, 1992 in Portland, Oregon. Sponsored by the American Primrose Society, the Royal Horticultural Society and the Berry Botanical Garden, the symposium will include floral exhibits and garden tours as well as papers on *Primula* species and cultivars. Already more than 8000 registration brochures have been sent out. For more information contact Ann Lunn, Registrar, 6620 N.W. 271st Avenue, Hillsboro, Oregon 97124.

l'ACFAS

Dans le cadre du 350e anniversaire de Montréal le 60e congrès de l'Association canadienne française pour l'avancement des sciences aura lieu à l'Université de Montréal, 11 à 15 mai 1992. Renseignements: Dr. F. Sarhan, Département des sciences biologiques, Université du Québec à Montréal, Caisse Postale 8888, Succursale A, 1200 St-Alexandre, Montréal PQ H3C 3P8.

IOPB Symposium

"Experimental and Molecular Approaches to Plant Biosystematics", the Fifth International Symposium of the International Organization of Plant Biosystematists, will be in St. Louis, MO, June 11-15, 1992. Hosted by the Missouri Botanical Garden, the Symposium will feature field trips, contributed papers, posters and 4 symposia: DNA and Plant Biosystematics / Plant Growth Patterns and Plant Biosystematics / Plant Reproduction: Patterns and Processes / Phylogenetic Analysis and Population Biology. For registration information contact Peter C. Hoch, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166-0299.

Gaseous Pollutants Symposium

The 3rd International Symposium on Gaseous Pollutants and Plant Metabolism will be held at Virginia Polytechnic Institute and State University, Blacksburg, VA, on June 13-16, 1992. This symposium is limited to 250 registrants. For information, telephone: Dr. Ruth Alscher, (703) 231-6761, or write: Conference Registrar, Donaldson Brown Center for Continuing Education, Virginia Tech., Blacksburg VA, 24061-0104.

CPS Annual Meeting

The Canadian Phytopathological Society will hold its annual meeting in Charlottetown, PEI, June 21-24, 1992. For information contact: Dr. S.R. Rimmer, Department of Plant Sciences, University of Manitoba, Winnipeg MB R3T 2N2.

CSPP / SCPV Annual Meeting

The 34th Annual Meeting of the **Canadian Society of Plant Physiologists / la société canadienne de physiologie végétale** will be held at Memorial University, St. John's, **July 12-17, 1992**. Symposia on The Physiology of Marine Plants and Low Temperature Tolerance are planned. For further information contact: **Dr. Roger Lee, Department of Biology, Memorial University, St. John's NF A1B 3X9.**

Sexual Plant Reproduction

The 12th Congress on Sexual Plant Reproduction will be held in Columbus, Ohio, **July 19-23, 1992**. The congress is subtitled, "**Plant Reproductive Biology: Pollen, Ovules and Seeds**". For information on registration: **Dr. V. Raghavan, Department of Plant Biology, Ohio State University, 1735 Neil Avenue, Columbus, OH 43210.**

Crop Science Congress

The **International Crop Science Congress** will be at Iowa State University, Ames, Iowa, **July 14-22, 1992**. For further information contact: **Dr. Kenneth Frey, Agronomy Department, Iowa State University, Ames IA 50011.**

Plant Membrane Biology

An **International Workshop on Plant Membrane Biology** will be held in Monterey, California, **July 19-24, 1992**. For information contact: **Dr. Lincoln Taiz, Biology Department, University of California, Santa Cruz CA 95064.**

ASPP Annual Meeting

The annual meeting of the **American Society of Plant Physiologists** will be in Pittsburgh, PA, **August 1-6, 1992**. Contact: **Dr. Mel Josephs, Executive Director, ASPP, 15501 Monona Drive, Rockville MD 20855.**

ASHS Annual Meeting

The 89th Annual Meeting of the **American Society for Horticultural Science** will be in Honolulu, Hawaii, **July 31-August 6, 1992** (immediately preceding the AIBS Meeting - see next column). For more information and registration contact **A.S.H.S., 113 South West Street, Suite 400, Alexandria, VA 22314-2824.**

APS Annual Meeting

The annual meeting of the **Americal Phytopathological Society** will be in Portland, Oregon, **August 8-12, 1992**. For information: **APS Headquarters, 3340 Pilot Knob Road, St. Paul, MN 55121-2097.**

43rd AIBS Annual Meeting

This year's **American Institute of Biological Sciences** Annual Meeting will be in Honolulu, Hawaii, **August 9-13, 1992**. This meeting includes the annual meetings of several societies of interest to many members of CBA/ABC: **Botanical Society of America, Ecological Society of America, Americal Bryological & Lichenological Society, American Fern Society, American Society of Plant Taxonomists, Association of Tropical Biology, International Society of Ecological Modelling, Organization for Tropical Studies, Phycological Society of America, and Society of Economic Botany.** Registration information may be obtained from **Meetings Dept., A.I.B.S., 730 11th Street NW, Washington, DC 20001-4521.**

Tropical Plant Phytochemistry

The **Phytochemical Societies of Europe and North America** are sponsoring an **International Symposium on Phytochemical Potential of Tropical Plants** at the Deauville Hotel, Miami Beach, Florida, **August 8-12, 1992**. For further information contact: **Dr. Kelsey R. Downum, Department of Biological Sciences, Florida International University, Miami, FL 33199.**

Photosynthesis / Plant Stress

Back-to-back meetings in Japan for researchers on photosynthesis and plant stress include the **9th International Congress on Photosynthesis** in Nagoya, **August 30-September 4, 1992** and a **Symposium on Regulation of Carbon Metabolism in Plants under Stress** in Ise Shima National Park, Mie, **September 5-7, 1992**. For information on the Congress on Photosynthesis contact: **Prof. Norio Murata, Secretariat, IXth Congress on Photosynthesis, National Institute for Basic Biology, Okazaki 444, Japan.** For the Stress Symposium contact: **Dr. H. Ushida, Laboratory of Chemistry, Faculty of Medicine, Teikyo University, Ohtsuka, Hachioji, Tokyo, Japan.**

Southern Temperate Ecosystems

An international symposium entitled "**Southern Temperate Ecosystems: Origin and Diversification**" is to be held at the University of Tasmania, Australia, **January 18-22, 1993**. Contributions on systematic, biogeographical, ecological and evolutionary aspects of southern temperate ecosystems are invited. Members of the **Ecological Society of Australia** and the **Palaeobotanical and Palynological Association of Australasia** will be associated with the symposium. For further information: **Dr. Robert S. Hill, Department of Plant Science, University of Tasmania, GPO Box 252C, Hobart, Tasmania, Australia 7001.**

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Advertisements for **Positions Open** and **Classified** categories may be placed at a cost of Can\$10.00 per published column centimeter. Individual members of the Association may place free advertisements of **Positions Wanted** and **Post-doctoral Opportunities**.

Copy for the April Bulletin must be received before the deadline of 10 April 1992.

Les soumissions pour le bulletin d'avril doivent arriver au plus tard le 10 avril 1992.

Editor / Rédacteur:

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