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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

FUTURE ANNUAL MEETINGS
RÉUNIONS ANNUELLES

1993 - Iowa State University, Ames, IA with AIBS (Aug. 1-5 août)
1994 - Calgary, Alberta

EDITOR'S COMMENTS
COMMENTAIRE DU RÉDACTEUR

I made it! I have survived a whole year as editor of the Bulletin! Although I have had to deal with the learning of a new computer publishing program, a serious setback in the health area and various other interruptions, such as teaching and research, I am looking forward to another year of producing your Bulletin.

I would like to thank all those who have sent in material for the Bulletin during the past year and those who have written expressing their pleasure concerning the contents of the Bulletin. A special thank you to our first editor, Janet Stein, for her kind words. Now I know, Janet, why you were such a grouch during the production of Volume 1, Number 1 (January 1968).

The last two issues were produced with Version 3 of Professional Page, our Amiga DTP package, and before the next issue is prepared I should receive an upgrade to Version 4. Each upgrade comes with lots more goodies (called "Genies") which make Bulletin preparation easier, but which don't really alter the look of the final product. The Bulletin currently has a little more copy each issue than will comfortably fit in the 16 pages, so this allows me to be a bit selective. You will notice occasionally, as with the reviews in the last issue, that I have reduced the font size to squeeze in the copy. However, I feel that if I, with my weak eyes, can read the small print, then you also can.

Printed on paper made of 100% recycled fibres

We have received a bit more news concerning the next annual meeting at Ames. The abstract forms arrived while the last issue was at the printers and were included in the October mailing. We have a few extras if anyone needs more forms (contact the Secretary or Editor). All of us will soon receive a registration package mailed directly from the U.S.A.

Among the several symposia planned for the joint BSA/CBA sessions, there are three which CBA/ABC is organizing or helping to organize. Christian Lacroix is organizing a symposium entitled, **Leaf development from molecular biology to the whole plant**. Vipen Sawhney is organizing **Mechanisms of male sterility** and Paul Catling is helping to organize a joint BSA/CBA symposium with the title, **An overview of the phytogeography and ecology of rock cliffs, barrens and glades in eastern North America**. Anyone who can't wait to find out what topics will be discussed in these symposia can contact one of the organizers.

This issue of the Bulletin has several student-oriented pages. We are hoping to get a large number of students participating in the Cinq-Mars Competition at Ames. Students (and supervisors) should ensure that they send a copy of the abstract and title submission form to the President-Elect, Keith Winterhalder. This will help to minimize any mistakes in communication between BSA organizers and Keith. Every student entering the competition should also apply for the Macoun Bursary. One Bursary (possibly two) will be awarded this year. Iowa State is one of the most prestigious American universities in agricultural sciences and this year's AIBS meeting is a great opportunity for Canadian students to visit the campus where so many current Canadian professors obtained a postgraduate degree.

This issue contains two pages of recent graduates. I am always amazed by the wide variety of topics studied by graduate students at various institutions in Canada. However, you will no doubt have noticed that the last issue and this issue only have lists of students who have graduated from eastern universities. We need more contributions from our western universities on your successful graduate students over the past two years.

Membership renewal forms have been mailed and should have been received by all of us. Please renew as soon as possible if you have not already done so. This will help the treasurer in her task of budgeting our expenses.

A reminder to those of you who are more than a year in arrears (those with "91" on the address label). If your past dues are not paid, you will only receive one more issue of the Bulletin and your name will be removed from the mailing list for July. I hope that you will decide to remain a member of CBA/ABC.

Finally, here are three more books that have been received for review. Volunteers, please!

P.G. Ayers - Pests and Pathogens. Plant Responses to Foliar Attack. (1992). Bios Sci. Publ., Oxford. 203 pp.

Daniel Côme - Les végétaux et le froid. (1992). Hermann, Paris. 600 pages.

C.J. Pollock, J.F. Farrar & A.J. Gordon (eds.) - Carbon Partitioning, within and between organisms. (1992). Bios Sci. Publ., Oxford. 258 pp.

Joe Gerrath, Editor/rédacteur

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PRESIDENT'S MESSAGE

The past year was a difficult and crucial one for CBA/ABC. We certainly came to an important watershed in our existence as an organization. Although we have lost many members in the past few years and have struggled with our role in the Canadian biological community, we have come through the crisis in good shape and reinvigorated. The spirited debate at the Annual General Meeting in Truro certainly proved that.

The most important issue that I had to deal with in the past six months since I took office has been the resignation of CBA/ABC from CFBS. On July 17th, 1992, I sent a FAX to Nicole Bégin-Heick, President of CFBS, informing her of the decision that was reached by CBA/ABC to quit CFBS. She replied on August 4th with a FAX acknowledging our decision and reminding us that our society is liable not only for the 1991-92 fees, but also for the 1992-93 fees (these fees include the $10 increase that was imposed by CFBS last year). The reason given for the extra year's payment of fees was that the 1993 budget was approved at the 1992 Board Meeting, while CBA/ABC was still a member. This budget includes the levy from CBA/ABC and, if the revenue were not received, a budget deficit would result. She further added that, of course, services would be provided to members of CBA/ABC until our membership officially is terminated (July 17th, 1993). That final statement must come as a great relief to CBA/ABC members who might have been worried that they would not get CFBS services in this year when we are paying our one year penalty. Speaking of services, the last issue of the CFBS Newsletter arrived in October and once again our society was left out of the section on "News from the Societies". So much for services! We must now decide how much of our owing dues we are to send off to CFBS and, once this has been dealt with, set the future membership fee for our association. I will be meeting with the present and past Treasurers (Nancy Dengler and Tim Dickinson) to discuss this matter in the near future.

The highlight of the past year has to have been the Annual Meeting in Truro, Nova Scotia. I've always felt that we have our best meetings when we're on our own in one of Canada's many small university towns. I felt like I was at a family reunion rather than at a formal scientific meeting. There was time to catch up with many of our colleagues who are scattered across our expansive country and to go to a variety of talks and symposia, ranging from molecular to ecological topics, without feeling that you were missing something important at one of four other concurrent sessions. Truro provided us with a truly memorable meeting and all members of CBA/ABC owe a great debt of thanks to Randy Olson and his faithful crew of helpers for their superb job of putting it all together. All of us who attended came away with wonderful memories of warm Nova Scotian hospitality. Many thanks again to all involved.

We face a challenging year ahead for our association. There are many uncertainties and pitfalls that must be dealt with. Our numbers are declining, botany and organismal science in general are under attack at many universities and there are few jobs for our graduating students. But, I'm optimistic about the future. I can feel the tide beginning to turn. There is an environmentally friendly administration coming to Washington (Al Gore seems to be quite a change from the old republicans who feared being buried alive by Spotted Owls!), and, as always, Ottawa will feel the need to follow in the footsteps of our neighbour to the south. Eventually there has to be a rediscovery of the necessity of organismal, descriptive and environmental biology. There is already a growing demand for taxonomists and ecologists who can identify, describe and predict the changes to our rapidly disappearing ecosystems. One can only hope that the current crop of Ph.D. graduates who can't get jobs will still be around to take advantage of the new opportunities.

I wish the members of CBA/ABC a very happy and successful New Year and I hope to see many of you at our Annual Meeting in Ames, Iowa.

Usher Posluszny, CBA/ABC President

Corrections

We have been informed that two FAX numbers published in the October bulletin are incorrect.

The correct FAX number for Dianne Fahselt (p. 52) is **(519) 661-3935**.

The correct FAX number for Keith Winterhalder (p. 64) is **(705) 675-4859**.

MESSAGE DU PRÉSIDENT

L'année qui vient de passer a été particulièrement difficile et cruciale pour l'ABC/CBA. Nous avons certainement atteint un stade important en ce qui a trait à notre existence comme association. Même si nous avons perdu plusieurs membres durant les dernières années et que nous avons fait tous nos efforts pour assumer notre rôle à l'intérieur de la communauté biologique canadienne, nous nous en sommes tirés en bonne forme et revigorés. Le débat animé à la rencontre annuelle à Truro témoigne de ce fait.

La question la plus importante avec laquelle j'ai du traiter durant les six derniers mois depuis mon entrée en fonction a été la démission de l'ABC/CBA de la FCSB. Le 17 juillet dernier, j'ai envoyé une télécopie à Nicole Bégin-Heick, présidente de la FCSB, l'informant de la décision de l'ABC/CBA d'abandonner la FCSB. Elle nous a répondu le 4 août par télécopie pour reconnaître notre décision et nous rappeller que notre société est responsable non seulement pour les honoraires de 1991-92, mais aussi pour ceux de 1992-93 (ces honoraires incluent l'augmentation de $10 imposée par la FCSB l'an passé). La raison qui nous a été donnée pour expliquer le paiement des honoraires pour une année supplémentaire est que le budget pour 1993 a été approuvé à la réunion du conseil d'administration en 1992, année durant laquelle l'ABC/CBA était encore membre. Ce budget inclut donc une levée de l'ABC/CBA et si ce revenu n'est pas perçu, un déficit résultera. Elle ajouta également, bien sûr, que les services seront pourvus aux membres de l'ABC/CBA. Cette dernière déclaration rassure les membres de l'ABC/CBA qui auraient pu s'inquiéter du fait qu'ils n'auraient pas reçu de services de la FCSB pour l'année durant laquelle nous devons payer notre 'amende'. En parlant de services, la dernière édition du bulletin de nouvelles de la FCSB nous est parvenue au mois d'octobre et encore une fois notre association a été omise de la section «News from the Societies». Voilà pour les services! Nous devons maintenant décider combien de nos frais d'inscription nous voulons transférer à la FCSB et ensuite determiner les frais futurs de notre association. J'aurai l'occasion prochainement de rencontrer les trésoriers (Nancy Dengler et Tim Dickinson) pour discuter de cette question.

Le clou de l'année a été la rencontre annuelle à Truro en Nouvelle-Écosse. J'ai toujours eu l'impression que nous avons nos meilleures rencontres quand notre association est la seule qui est présente et que nous nous situons dans une des nombreuses petites villes universitaires au Canada. J'avais l'impression d'être à une réunion de famille plutôt qu'à une rencontre scientifique formelle. L'horaire nous a permis de fraterniser avec plusieurs de nos collègues venus de différentes régions de notre grand pays et de participer à une variété de présentations et de colloques s'étendant sur une gamme de sujets moléculaires à écologiques sans trop craindre de manquer quelquechose d'important dans une des quatres autres sessions concourantes. La rencontre à Truro a été un événement véritablement mémorables. Les membres de l'ABC/CBA doivent un grand merci à Randy Olson et son équipe pour le travail exceptionel qu'ils ont fait. Tous ceux d'entre nous qui ont participé à la rencontre ont de merveilleux souvenirs de l'hospitalité chaleureuse des gens de la Nouvelle- Écosse. Un grand merci encore une fois à tous ceux qui ont participé.

Nous faisons face à une année remplie de défis pour notre association. Plusieures incertitudes et questions problématiques doivent être résolues. Le nombre des membres est en déclin, la botanique et la science organismale en générale sont en état de siège à plusieures universités et il y a peu d'emplois pour nos étudiants diplômés. Par contre, je suis optimiste pour le futur. On peut déjà percevoir un changement d'attitude. Une administration qui favorise l'environnement s'établira bientôt à Washington (Al Gore semble différer des vieux républicains et leur anxiété envers les questions qui traitent de l'environnement), et comme d'habitude Ottawa sentira le besoin de suivre dans les traces de son voisin du sud. Éventuellement, il est nécessaire qu'il y ait une redécouverte de la nécessité d'une biologie organismale, descriptive, et de l'environnement. Il y a déjà une demande croissante pour des taxonomistes et des écologistes qui peuvent identifier, décrire, et prédire les changements que subissent nos écosystèmes en voie de disparution. Nous pouvons seulement espérer que nos doctorats gradués qui n'ont pas d'emploi présentement seront disponibles dans le futur pour prendre avantage de ces nouvelles possibilités.

Je souhaite à chaque membre de l'ABC/CBA une très bonne nouvelle année couronnée de succès et j'espère voir un grand nombre d'entre vous à notre rencontre annuelle à Ames, Iowa.

Usher Posluszny, Président de l'ABC/CBA

(Traduction: Christian Lacroix)

COMPÉTITION LIONEL CINQ-MARS COMPETITION

Chaque année l'association canadienne de botanique décerne un prix pour la meilleure communication orale présentée par un(e) étudiant(e) 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(e) inscrit(e) à une institution canadienne d'études supérieures est éligible. La communication peut être présentée à n'importe quelle session de la rencontre. Un effort sera fait afin d'assurer à chaque étudiant(e) de pouvoir compter sur une chance ègale pour l'obtention de ce prix.

Cette année seulement veuillez prendre note que la rencontre annuelle aura lieu aux États Unis et que la langue officielle des communications à Ames, Iowa, sera l'anglais.

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, Keith Winterhalder. 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'audovisuel, clarté du texte).

La compétition Cinq-Mars est une partie importante de chaque rencontre annuelle. Nous comptons sur une forte participation et nous espérons que les étudiant(e)s bénéficieront autant de l'experience acquise à communiquer oralement que des commentaires qu'ils recevront de la part des membres du jury.

Veuillez prendre note que seuls les étudiant(e)s qui ont clairement indiqué(e) sur le formulaire de titre de résumé leur intention de participer à la compétition Cinq-Mars seront inscrit(e) sur la liste des participants.

Faites parvenir une copie du résumé de la communication et une copie du formulaire de la soumission de titre au président élu de l'ABC/CBA:

Dr. Keith Winterhalder
Département de biologie
Université Laurentienne
Sudbury, ON P3E 2C6
Télécopieur: (705) 675-4859

Each year the Canadian Botanical Association gives an award for the best student paper presented at the CBA/ABC annual 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 (oral) paper can be given at any session of the annual meeting. Every effort will be made to ensure that each student in the competition has a fair evaluation and an equal chance of winning the award.

Students should take note that, this year only, because we are meeting with BSA and AIBS in Ames, Iowa, the official language of presentations will be english.

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

The Lionel Cinq-Mars Competition is an important part of each annual meeting. We hope that there will be many participants at Ames and that the students will benefit, both from the experience of giving an oral presentation and from the comments which each student will receive 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.

Please send a copy of the abstract and a copy of the title submission form to the President-Elect of CBA/ABC:

Dr. Keith Winterhalder
Department of Biology
Laurentian University
Sudbury, ON P3E 2C6
FAX: (705) 675-4859

John Macoun Travel Bursary

The John Macoun Travel Bursary, named in honour of the man who served as official botanist on five major expeditions throughout Canada during the late 19th and early 20th centuries, is awarded to a graduate student who presents a paper in the Lionel Cinq-Mars Competition.

Eligibility:

1. Competition for the Bursary is open to **Canadian students both within and outside of Canada.** Eligible students are encouraged to apply, even if the CBA/ABC meeting is to be held at their own university.

2. Competitors **must present a paper in the Lionel Cinq-Mars Competition** at the 1993 CBA/ABC Annual Meeting in Ames, Iowa.

3. No student may receive more than one award from the Macoun Fund while registered for the same degree.

Procedures:

1. Students applying for an award must do so **no later than March 1, 1993.**

2. The application must contain the following documents:

a) **a copy of the Abstract** of the paper to be given in the Lionel Cinq-Mars Competition at the CBA/ABC Annual Meeting.

b) a **supporting letter from the student's Supervisor** of research that also includes a statement that the student is engaged in a Ph.D. or M.Sc. programme.

c) a statement from the student outlining the **amount of money requested.**

d) the student's **curriculum vitae** (one page).

e) a **letter of recommendation from a member of the student's research committee** (not the Supervisor).

3. Send the complete set of application documents to the CBA/ABC President:

Dr. U. Posluszny
Department of Botany
University of Guelph
Guelph, ON N1G 2W1
FAX: (519) 767-1991

4. The CBA/ABC President will appoint a **Student Awards Committee** to screen applications and to recommend the candidates for awards and the amount of each award. The sole selection criteria shall be those of academic merit.

5. Macoun Bursary winners will be notified before the registration deadline for the annual meeting, if possible, and awards will be paid at that time.

6. During the awards ceremony at the CBA/ABC Annual Meeting, Macoun Bursary winners will be officially announced and presented with an award certificate.

New Publication

Seaweeds of the Maritimes. Volume 1. Rhodophyta - the Red Algae. by Carolyn J. Bird and Jack L. McLachlan. 1992.

This book is intended as a guide for the university student and serious amateur naturalist. It covers 55 genera and 73 species of the more common red seaweeds of the Candian Maritime Provinces. The descriptions include notes on distribution, habitat, seasonality, taxonomy and biology. Both macroscopic and microscopic aspects of the algae are illustrated by black-and-white photographs. A key to the genera is provided, as well as keys to species for genera with more than one species under discussion. The manual is relevant in North America from Cape Cod north at least to Newfoundland, and also in northern Europe.
For information on price, etc., contact:

Biopress Ltd.
"The Orchard"
Clanage Road
Bristol BS3 2JX
England

La bourse de voyage John Macoun

La bourse de voyage John Macoun, établie en l'honneur de l'homme qui, dans l'exercice de ses fonctions en tant que botaniste, a participé à 5 expéditions majeures à travers le Canada de la fin du 19e siècle au début du 20e siècle, est alloué à un(e) étudiant(e) gradué(e) qui présente une communication dans le cadre de la compétition Lionel Cinq-Mars.

Eligibilité:

1. La compétition pour la bourse est ouverte **aux étudiant(e)s canadien(ne)s au Canada ou à l'étranger.** Les étudiant(e)s qui sont éligibles sont encouragé(e)s à remplir une demande même si la rencontre annuelle de l'ABC/CBA se tient à leur université.

2. Le(la) concurent(e) doit présenter **une communication dans le cadre de la compétition Lionel Cinq-Mars** à la rencontre annuelle à Ames, Iowa.

3. Un(e) étudiant(e) ne peut recevoir plus d'un prix de fonds Macoun pour la période durant laquelle il(elle) est inscrit(e) à un programme spécifique de degré universitaire.

Procédure:

1. Les étudiant(e)s doivent faire parvenir leur demande pour la bourse de voyage **au plus tard le 1er mars 1993.**

2. **La demande doit contenir les documents suivants:**

a) **une copie du résumé de la communication** pour la compétition Lionel Cinq-Mars à la rencontre annuelle de l'ABC/CBA.

b) **une lettre d'appui de la part du directeur de thèse de l'étudiant(e)** qui doit également incluire une déclaration que l'étudiant(e) en question est inscrit(e) à un programme de maîtrise (M.Sc.) ou de doctorat (Ph.D.).

c) **un compte rendu des dépenses** prévues par l'étudiant(e).

d) **le curriculum vitae** de l'étudiant(e) [une page seulement]

e) **une lettre de référence** d'un membre du comité de direction de l'étudiant(e) [directeur de thèse exclu]

3. Veuillez faire parvenir la demande complète au président de l'ABC/CBA:

Dr. U. Posluszny
Département de botanique
Université de Guelph
Guelph, ON N1G 2W1
Télécopieur: (519) 767-1991

4. Le président de l'ABC/CBA nommera les membres d'un comité de sélection de prix estudiantins. Ce comité examine les demandes et recommande les candidats pour certains prix et le montant alloué pour chaque prix. Le seul critère d'évaluation sera celui du mérite académique.

5. Les gagnant(e)s de la bourse Macoun seront avisé(e)s avant la date finale d'incription pour la rencontre annuelle, si possible, et les prix leur seront remis à ce temps.

6. Durant la remise officielle des prix à la rencontre annuelle, les gagnant(e)s de la bourse Macoun seront annoncé(e)s et un certificat leur sera présenté.

Traduction: Christian Lacroix.

Nouvelle parution

Bernard Boivin. - Les Cypéracées de l'est du Canada. Provancheria No. 25 (1992). $15,00.

Cette monographie présente, décrit et analyse en détail la famille des Cypéracées, l'une des plus considérables et des plus difficiles de la flore de l'est du Canada. Les Cypéracées ont une très grande importance économique et biologique parce qu'elles se retrouvent dans tous les écosystèmes et à toutes les latitudes et altitudes. Leur connaissance est essentielle pour l'écologiste, le biologiste, l'agronome, le forestier et le géographe. Le présent travail est nettement plus élaboré, plus complet et plus détaillé que dans l'***Enumeration des plantes du Canada***, déjà publié par B. Boivin en 1967. Il contient des clés d'identification, des descriptions et des illustrations. [*Extrait de la présentation de la mémoire*]

GRADUÉ(E)S RÉCEMMENT
RECENT GRADUATES

Université du Québec à Montréal - Groupe de recherche en écologie forestière

Maîtrise en biologie

M. Patrice Babeux (1991) "Les effets de coupes printanières sur la production de rejets de souche chez l'érable rouge (***Acer rubrum*** L.) dans le nord-ouest québecois." Directeur de recherche: Dr Yves Mauffette.

M. Gabriel Bessette (1991) "La distribution et l'abondance des plantes de sois-bois dans les érablières saines et dépéries du sud-est du Québec." Directeur de recherche: Dr Daniel Gagnon.

M. René-Pierre Dansereau (1991) "La reconstitution historique des feux dans un secteur forestier au sud du lac Abitibi (Québec)." Directeur de recherche: Dr Yves Bergeron.

M. Louis De Grandpré (1991) "Succession après feu chez les plantes de sois-bois à la limite sud de la forêt boréale." Directeur de recherche: Dr Daniel Gagnon.

Mme Danielle Lalonde (1992) "Distribution et dynamique des communautés d'érables rouges à leur limite nord de répartition en Abitibi (Québec)." Directeur de recherche: Dr Yves Bergeron.

M. Robert Mercier (1992) "Développement et application d'une méthode dendrométrique permettant de caractériser l'origine (graine ou drageon) du peuplier faux tremble (***Populus tremuloides*** Michx.)." Directeurs de recherche: Dr Yves Bergeron et Dr Réjean Gagnon.

Maîtrise en sciences de l'environnement

Mme Marie-Claude Brisson (1992) "Productivité du pin gris (***Pinus banksiana*** Lamb) selon un gradient topographique, Québec." Directeurs de recherche: Dr Yves Bergeron et Dr Richard Zarnovican.

Mme Kim Marineau (1992) "Effets de la répression des herbacées à l'aide d'herbicide et de paillis de plastique sur la croissance du chêne rouge et du frêne rouge." Directeur de recherche: Dr Daniel Gagnon.

Mme Marie-Claude Rousseau (1991) "Relation entre le degré d'hétérozygotie, la croissance et la distribution écologique d'une population de pin gris (***Pinus banksiana*** Lamb)." Directeurs de recherche: Dr Yves Bergeron et Dr Jean-Pierre Simon.

Merci à Dr Yves Bergeron, directeur GREF

University of Guelph Department of Crop Science

William O. Amatika (M.Sc.) "The effects of seed size and maturity on seed viability, seed vigour and field performance in indeterminate soybeans." Advisor: Ed Gamble.

Dale Anderson (M.Sc.) "Sensitivity differences between barley and green foxtail to glufosinate-ammonium." Advisors: Clarence Swanton and Chris Hall.

Douglas Arthur Derkson (Ph.D.) "The influence of agronomic practices on weed communities." Advisor: Clarence Swanton.

Michael Robert Hall (M.Sc.) "The critical period of weed control in corn (***Zea mays*** L.) and the impact of weed interference upon corn development." Advisors: Clarence Swanton and Glen Anderson.

Godfried Hotsonyame (M.Sc.) "Factors controlling leaf area development of spring wheat, rye and triticale under field conditions in Ontario." Advisor: Tony Hunt.

Andrew Kielly (Ph.D.) "Genetic improvement of alfalfa for *in vitro* responses." Advisor: Steve Bowley.

Vikram S. Malik (M.Sc.) "Impact of white bean (***Phaseolus vulgaris*** L.) cultivars, row-spacing and seeding density on annual weed interference." Advisors: Clarence Swanton and Tom Michaels.

Stephane Marc McLachlan (M.Sc.) "Effects of corn-induced shading on redroot pigweed phenology, architecture and reproductive ecology." Advisors: Matthijs Tollenaar and Clarence Swanton.

(Continued)

Michael E. Reidy (M.Sc.) "Postemergence control of quackgrass (***Elytrigia repens*** (L.) Nevski) with DPX-79406." Advisor: Clarence Swanton.

Joseph Sarkodie-Addo (M.Sc.) "Evaluation of ***Bradyrhizobium japonicum*** strains isolated from Ontario soybean fields." Advisor: David J. Hume.

Rene van Acker (M.Sc.) "The critical period of weed control in soybean (***Glycine max*** (L.) Merr.) and the influence of weed interference on soybean growth." Advisor: Clarence Swanton.

Yussuf Yakubu (M.Sc.) "Effect of planting pattern on crop/weed competition in corn." Advisor: Clarence Swanton.

Yu Kang-fu (Ph.D.) "The application of random amplified polymorphic DNA (RAPD) markers to determine relatedness and genetic linkages in alfalfa." Advisor: Peter Pauls.

Department of Horticultural Science

Frank Borsa (M.Sc.) "Growth, development, yield and interaction of ***Leucaena leucocephala*** and ***Zea mays*** in a hedgerow intercropping system." Advisor: Vince Souza-Machado.

Richard Coté (Ph.D.) "Gas exchange and photoassimilate partitioning in tendrils, leaflets and stipules of ***Pisum sativum*** L." Advisor: Bernie Grodzinski.

Arione da Silva Pereira (Ph.D.) "Inheritance of factors affecting chip quality and their associations with some economic traits of potatoes." Advisors: Vince Souza-Machado and Robert Coffin.

David C. Percival (M.Sc.) "Effect of mechanical leaf removal in the production of ***Vitis vinifera*** L. cv. 'Riesling' grapes." Advisors: J. Alan Sullivan and K. Helen Fisher.

Xie Yanping (M.Sc.) "Photosynthetic activities of tendrils, stipules and leaflets of garden pea (***Pisum sativum*** L.)." Advisor: Bernie Grodzinski.

Department of Land Resource Science

Lu Shen (Ph.D.) "Efficiency of fertilizer phosphorus placement and its effect on VA mycorrhizal colonization of maize (***Zea mays*** L.)." Advisor: Murray Miller.

University of Guelph
Department of Environmental Biology

Robert MacDonald (M.Sc.) "Basis for sensitivity differences among four broadleaf species to fluroxypyr." Advisors: Chris Hall and Clarence Swanton.

Maureen Peniuk (M.Sc.) "Absorption, translocation and metabolism are not the basis for differential selectivity of wild mustard (***Sinapis arvensis*** L.) to auxinic herbicides." Advisor: Chris Hall.

Department of Botany

Stephen Bradbury (M.Sc.) "Colonization of three alfalfa nodulation genotypes by vesicular arbuscular mycorrhizal fungi." Advisor: Larry Peterson. **[Stephen was the 1992 winner of the CBA/ABC Lionel Cinq-Mars Competition at Truro, N.S.]**

Tom Duralia (M.Sc.) "Effect of neighbours on common versus less common prairie grasses." Advisor: Richard Reader.

Stanley Iwanyski (M.Sc.) "Structure and development of mycorrhizae formed between two pine species (***Pinus banksiana, Pinus contorta***) and the postfire ascomycete ***Sphaerosporella brunnea***." Advisor: Larry Peterson.

University of New Brunswick
Faculty of Forestry

H. A (M.Sc.F., 1991) "Rooting depth and soil conditions in selected black spruce plantations." Supervisor: H.H. Krause.

C.L. Carswell (M.F., 1992) "Vegetative phenology and growth responses of ***Larix*** Mill. species in New Brunswick." Supervisor: E.K. Morgenstern.

J.M. Were (M.Sc.F., 1992) "Mechanisms of seed dormancy in ***Juniperus procera*** (Hochst. *ex* Endl.)." Supervisor: T.D. Needham.

R. Ujang (M.F., 1991) "Crop classification using Multitemporal Landsat Multispectral Scanner data." Supervisor: F.S. Oliver.

BOOK REVIEWS / ÉVALUATIONS

Historia Natural de un Valle en Los Andes: la Paz. Edited by Eduardo Forno & Mario Baudoin. 1991. Instituto de Ecología, Carrera de Biología, Facultad de Ciencias Puras y Naturales, Universidad Mayor de San Andrés, La Paz, Bolivia. xii + 559pp. [text in Spanish] 110.00 Bolivianos. [obtainable from: Instituto de Ecología, U.M.S.A., Casilla de Correo Central 10077, La Paz, Bolivia.

Bolivia is a relatively isolated country and, as a function of that isolation, has few available reference materials in the natural sciences. That engenders a basic need for the sort of nationally-relevant guide that this book represents. This book makes a study of the valley of La Paz, an area of around 24 by 42 km containing the city of a million people, as well as cultivated and natural terrain at altitudes from less than 3000 m to more than 5500 m. While relevant to Bolivia, this can not be taken to imply that it is relevant to all of Bolivia - two-thirds of which is situated in the forested lowlands of the Amazon and Paraná basins. La Paz is on the northeast boundary of the altiplano.

The book is divided into 4 sections: an introduction dealing with geology, climate, and history of human settlements; and three sections dealing with taxonomy and ecology of the flora, fauna and aquatic lifeforms. There are a total of 21 chapters written by various authors on their particular areas of expertise. The flora is discussed in relation to its habitat by altitudinal zones, urban flora, bogs and mosses, and special morphological adaptations (e.g. the bromeliad ***Puya***). A comprehensive species list (with authorities) is provided, and also an index of common names. Common and scientific nomenclature for mammals, birds, reptiles, amphibians, fish, lepidoptera, insects active in pollination, and aquatic invertebrates are also provided, with ecological features significant for each, but authorities are not given (except for a variant race of domestic dog, ***C. ingae*** Tschudi). Unfortunately, palaeontology is not covered. All taxa are referenced in a general index at the back.

Its format makes the information in the book readily accessible, whether the text is read in full or only a certain section is consulted. A number of clear and illuminative drawings and photographs aid identifications, although the illustrations in the chapter on mosses are below the standard of the rest of the book. Because of the large number of data tables and the use of taxonomic hierarchies in each section, the book can be used to a degree by non-Spanish speakers. This constitutes the basis of a very good biological text, one of the stated objectives of the book. Shortcomings in the comprehensiveness of the information are not hidden, but rather brought to the reader's attention, an ethic for which the editors should be congratulated. It is particularly worthwhile in a location such as Bolivia's, where so many species remain unidentified.

Gordon T. Hart, Centro de Estudios Regionales para el Desarrollo de Tarija [CER-DET], Tarija, Bolivia.

Shrubs of the Great Basin. by Hugh N. Mozingo. 1987. University of Nevada Press, Reno, Nevada.

This is an informative and readable popular collection of species accounts in the tradition of D.C. Peattie's natural histories of trees. Each of the 65 primary entries (about 80 other species are mentioned in passing) includes a lovely line drawing by Christine Stetter and a simplified diagnostic description that both gives the look of the shrub and sets it apart from the most similar species. In addition, the accounts present notes on classification and on etymologies of common and scientific names, on distributions within and beyond the Great Basin (a realm of internal drainage corresponding roughly to Nevada and Utah), on ecology and specific adaptations, on horticultural potential and other aspects of economic botany, on wildlife and tamelife relations -- in short, on anything that could be gleaned from the literature on, and experience with, each species. Colour photographs of most of the species are unspectacular (the shrubs themselves are mostly pretty unprepossessing), but usefully supplement the drawings. About 40% of the main species are found also in Canada, primarily in southeastern British Columbia and southwestern Alberta, so these accounts make for interesting comparisons of northerly versus southerly populations. A list of names in four Great Basin languages is not really rooted in any context. A short introductory chapter on the Great Basin is helpful in setting the stage but another on general features of ecology and evolution of Great Basin shrubs is full of inaccuracies. Some of these carry into corresponding passages of the individual species accounts but they are a minor component of the accounts and do not seriously diminish my overall favourable assessment of this well-researched volume.

J. E. Eckenwalder
Dept. of Botany, University of Toronto

Biology of the Red Algae. Edited by Kathleen M. Cole and Robert G. Sheath. (1990) Cambridge University Press, Cambridge. 517 pp.

This is another in a recent series of books by various publishers which attempt to present an overview of one of the many groups of algae. This book comprises 18 chapters, each written by one or more experts in the topic under discussion. Many chapters are copiously illustrated with beautiful micrographs and photographs, but, for some reason, on most pages the illustration only occupies 2/3 of the page width. Most chapters are liberally sprinkled with comparison tables, drawings and graphs copied from various publications. As a whole the book provides an excellent review of the current state of knowledge on a wide range of topics concerning the red algae.

After a brief introductory chapter the book describes everything you might want to know about red algal cell structure, including cytoplasmic organelles, pit plugs and reproductive cells. An elegant series of DAPI fluorescence micrographs illustrates the chapter about the mysteries of multinuclearity in reds, and also about the peculiar behaviour of red algal parasites, which inject their nuclei into cells of the host. The chapter on chromosomes contains a massive 9-page table listing all known chromosome counts. Mitosis, meiosis and genetics are covered, followed by discussions of osmotic relations and carbon metabolism, and of biochemical studies on pigments and cell walls. Five chapters deal with various aspects of red algal reproduction, growth and development, and two chapters present an overview of marine and freshwater ecology of reds. The book ends with a brief chapter detailing the current ordinal classification of reds and discussing evolutionary relationships.

To the teacher of a phycology course this book provides a wealth of information from which it is quite easy to glean a few nuggets which might penetrate the skulls of botany students unschooled in the weird and wonderful ways of the red algae. The book's price, which I have omitted for fear of causing fainting *en masse*, will ensure that it is only bought by those who are truly devoted to this interesting and important group of organisms. If you are one of these persons, I am sure the publisher will be glad to send you the price information in a plain brown wrapper.

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

Microclimate, Vegetation and Fauna. By P. Stoutjesdijk and J.J. Barkman. 1992. Opulus Press, Uppsala, Sweden. 216 pp. Price: Kr. 230 (Swedish), or about $49.00 (Canadian).

This small paperback is an expanded and updated translation of a text originally published in Dutch. The book, therefore, is written mainly with a European readership in mind, although the discussions in the book should be applicable in any geographical context.

One excellent thing about the text, which is evident right at the start, is that the authors assume (correctly in my case) that you are a complete dunderhead when it comes to the terminology used in this field of research. The first part of the book introduces the principles of microclimate studies and details the many factors affecting moisture and energy flow on a microhabitat level. The next section discusses the effect of plants on microclimate, with a discussion of several examples of northern European vegetational areas, such as grassland, Juniper scrub, heathland and forests. The book includes a discussion of the significance of microclimatic factors (heat and moisture) to plants and animals, especially their effects on plant leaves. The book ends with a chapter discussing methods of investigation and describing instrumentation for taking measurements of any microclimate factors. As a whole the book provides an excellent general introduction to the field of microclimate studies, and would be a useful reference text for an advanced undergraduate or graduate student to have on a handy bookshelf.

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

New Canadian Botanical Stamps

Everyone by now knows that the new year has brought another increase in Canadian postal rates. Three new botanical subjects, in an overall design similar to that of the previous set, are shown on stamps meant for mail sent outside the country. The 49 cent and 67 cent stamps for U.S.A. destinations show the Delicious apple and beaked hazelnut, respectively. The 86 cent stamp for other international letters shows the Bartlett pear. Each design has a pastel image of the enlarged fruit in the background, overlain by a picture of the tree and an enlarged flower or inflorescence.

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.

"The First Ecologist"

Our thanks to our Bolivian correspondent (and CBA/ABC member), Gordon Hart, who submitted (and translated) this article and the following two items obtained from local newspapers. Ecologists among you will no doubt be interested to know that the former Bolivian President, Dr. Victor Paz Estenssoro, during a speech marking the feast of St. Francis of Assisi, said that, because of his love of nature, St. Francis could be considered the first ecologist of humankind.

Presencia, La Paz, Bolivia, Oct 6, 1992

Permit to Destroy

In an attempt to mollify international opinion, the Brazilian government is trying to control the destruction of the Amazonian rainforests by setting up a system to "authorize" burns to create new farmland. It remains to be seen whether this will have any effect in reducing the massive "unauthorized" burns currently occurring. Penalties under the new law will include the loss of the "right to use chainsaws". Perhaps making offenders revert to axes will slow forest destruction marginally?

Ahora/El País, Tarija, Bolivia, Nov. 12, 1992

Chewers Last Longer

A Peruvian study compared the performance of habitual coca leaf chewers with non-chewers. At rest there was no difference in hearbeat, blood pressure or other metabolic measurements. However, when tested during physical effort, coca chewers had a more accelerated heartbeat and a lower perception of fatigue than the control group. The study said that the effect of coca was like that of caffeine, "another powerful stimulant that for economic and cultural reasons has garnered a 'clean' image and official classification as a non-toxic drug freed from the prejudicial scrutiny and adverse propaganda to which the use of coca is so frequently subjected".

Ahora/El País, Tarija, Bolivia, Oct. 28, 1992

Dr. Magnus Pyke (1908 - 1992)

Dr. Magnus Pyke, BBC Television's quintessential "mad scientist" died last October. He became well known for his forceful explanations of scientific concepts while bounding about the screen during his appearances on such TV programs as **Don't Ask Me** and **Don't Just Sit There**, which were broadcast also on several Canadian and American educational channels. He was in reality a well-respected chemist and nutritionist and was the author of the British Ministry of Food's first **Manual of Nutrition** in 1945. Although his father died when he was 15, Pyke's phenomenal memory enabled him to get high marks and to win enough prizes and scholarships to finance his own education. Of special interest to Canadian botanists is the little known fact that he came to Montreal at age 19 and obtained his B.Sc. in Agriculture at McGill's Macdonald College in 1933. Returning to England in 1934, he obtained a position as chief chemist at a London firm and, at the same time, worked on his Ph.D., which he obtained in 1936 from University College. In 1941 both he and his Ph.D. supervisor joined the Ministry of Food, and later, in 1949, he took up a position with a distillery. He was secretary and chairman of the Council of the British Association for the Advancement of Science from 1973 to 1977. His first foray into the broadcasting arena was a presentation on the nutritional excellence of cabbage, and his unique style of delivery soon gained him an avid following. He later scorned the fad of putting chlorophyll in everything from toothpaste and chewing gum to toiletries and air fresheners, and during this campaign he was famed for quoting the couplet:

"The goat that reeks on yonder hill
Has browsed all day on chlorophyll."

His wit and wisdom, both as a nutritionist and as a TV personality, will be missed.

Annie Rankin, The Times of London, Oct. 21, 1992

New Elms

The boob-of-the-month award goes to this Associated Press item which completely garbles the species concept and cultivars.

"Two *new species* of elm trees resistant to the disease that stripped many North American towns and campuses of their leafy canopies may soon be ready for marketing. The *new species*, named Frontier and Prospector, were developed from *Asian and European varieties* resistant to Dutch elm disease."

So much for the botanical knowledge of news agencies! By the way, the new **cultivars** should be available on the retail market in 1994.

Toronto Star, Dec. 6, 1992

Resistant Wheat

This article from the Los Angeles Times Syndicate optimistically proclaims, "**Scientists win battle with leaf rust**". A team led by Sanjaya Rajaram of the Centro Internacional de Mejoramiento de Maiz y Trigo in Mexico City says that they have "finally won the battle against leaf rust" of wheat. The new resistant variety allows the fungus to grow but "disables" it, so that it will not mutate and will cause minimal damage. It has been tested in several growing areas for 12 years without a serious outbreak of the disease.

KW Record, Nov. 23, 1992

Orange Power

A U.C.L.A. study reports that "men who drink 5 glasses of orange juice a day [*that's 20 oranges!!*] may be able to add 6 years to their lives. The vitamin C from citrus fruits may reduce heart attacks by up to 45% in men and 25% in women". The usually recommended daily dose of ascorbic acid (vitamin C) is 40 mg (obtainable from half an orange), but megadosers recommend up to 2 g per day because of its immune enhancing and detoxifying effects. Oranges also contain folic acid, which serves to enhance uptake of iron. However, don't drink tea with your orange juice because the tannins will block the uptake of iron. Vitamin P, which helps resist pressure in thin blood vessels, is another beneficial constituent of oranges. On the down-side, oranges can be allergenic and are more likely to cause migraines than other fruits.

Annie Rankin, The Times of London, Nov. 14, 1992

More on Hirsute Potatoes

The King Baudouin International Agricultural Research Award, presented every two years, has gone to the International Potato Centre in Lima, Peru. The most famous recent product of the Centre is the "hairy spud", developed at Cornell under a contract from the IPC and featured in the Bulletin's Plant Press column last year. This insect-resistant cultivar was developed in breeding experiments using ***Solanum berthaulthi***, which has a dense covering of glandular trichomes. According to the article, the Colorado potato beetle eats the glandular secretion and "gets a serious case of constipation". The stomach swells and the ovaries are crushed. The sticky secretions actually trap and kill smaller insects such as aphids, thrips, leafhoppers, mealybugs and mites. Best of all, the hairy spud, which will be grown in up to 40 countries this year, has yields comparable to those of potato cultivars currently grown.

KW Record, Nov. 23, 1992

Exotic Find

In a survey of London trees aimed at restoration of vegetation destroyed by massive windstorms in 1987 and 1990, two rare "Pride of India" trees (***Koelreuteria paniculata***), also called "golden rain trees", were discovered in an industrial wasteland. The Forestry Commission will conduct tests with seeds collected from the trees to determine if this species would be valuable for use in future urban plantings. The trees were probably planted as ornamentals in grander days when the industrial area was occupied by neighbourhoods with large houses.

The Times of London, Aug. 28, 1992

. . . Not Gold

"Gold, frankincense and myrrh", one of the most familiar biblical phrases, is under attack by biblical scholars. "Gold", apparently, is mistranslated and should really be "golden frankincense", the very highest quality grade of this valuable incense. The magi, therefore, brought the baby Jesus three highly prized types of incense. In those times, and even today, the best frankincense comes from small, scraggly trees growing in the southern Arabian peninsula (Oman and eastern Yemen) and is harvested by scraping the bark to collect resin droplets. Recent excavations of two fortified "lost cities" in Oman, Ubar and Safara Metropolis, indicate that the incense trade in ancient times was controlled by an OPEC-like cartel. Archaeologists estimate that at the time of Christ as much as 2700 tonnes of frankincense was exported each year from southern Arabia to the Roman empire and elsewhere. This bustling trade in incense collapsed with the rise of Islam, which seldom uses any in rituals.

KW Record, Jan. 9, 1993

Hurricane Iniki

Damage Report from the National Tropical Botanical Garden, Kauai

Our thanks to Nancy Dengler who sent us a copy of a 6-page news release (dated October 27, 1992) describing the effects of Hurricane Iniki on the National Tropical Botanical Garden (NTBG) on the island of Kauai. A condensed version of the information is presented here.

Extensive damage to buildings and plant collections was caused by winds estimated at 175 mph. The Lawai Gardens (NTBG headquarters, 186 acres), Allerton Gardens (100 acres, managed by NTBG), Limahuli Gardens (a satellite garden on the north shore of Kauai) and the Limahuli Preserve (natural area, 990 acres) all were damaged.

At the Lawai Gardens the office of the director, Dr. Theobald, was severely damaged, as were his own home and the homes of many of the Garden's staff. The administrative and research buildings are intact (slight damage) but without air conditioning there is fear that humidity damage may occur to the library and herbarium collections. The Lawai vistor centre (museum and gift shop) was damaged by a toppled, full-grown monkey pod tree and much of the inventory was destroyed. One of the three student housing units was destroyed.

The staff and volunteers immediately began a program of clearing debris and identifying those plants which could be saved by being pruned or staked upright. Arborists from as far away as Philadelphia came to contribute their expertise. Cuttings and seeds were obtained from destroyed plants in order to grow replacement specimens. The native Hawaiian plants, happily, mostly survived the hurricane.

At the Allerton Gardens most of the mature trees suffered severe damage and many were blown down. The historic Allerton house was destroyed and the contents were strewn about by high waves. As many as possible of the rare books, artifacts, artwork and furnishings have been salvaged, and conservators from the Bishop Museum are attempting to preserve them. Queen Emma's cottage was lifted and moved 30 feet to slam into the Allerton house, but it should be possible to restore this historic building. Clearing activities among the clogged, narrow pathways at the Allerton Gardens will be slow, since the entire region of the island coast is a tangle of vegetation and building debris.

At Limahuli Gardens it is estimated that about 25% of the living plant collection (including some rare and endangered species) was damaged.

All of the recovery work following the hurricane was hampered by the lack of electricity, and the telephone system of the entire island was severely damaged also. Water purification has been a major problem for supplying water to delicate seedlings, cuttings and other sensitive plants. All education programs of the NTBG have been temporarily suspended and regular research program activities are greatly limited because of the higher priority of plant rescue programs. A comprehensive assessment of all damage to the living collections is progressing, and this disaster has provided an opportunity for revisions to be made to the computerized data records system. A program of reidentification will have to be carried out to replace labels which have been blown away.

Field staff are conducting surveys in natural areas on Kauai containing native Hawaiian plants. These areas, where ongoing NTBG research is being conducted, were also heavily damaged, not only by Iniki, but also by conditions following the hurricane. Staff are trying to save damaged native plants and are also collecting voucher specimens, seeds and cuttings from those plants which, it is thought, will not survive. Many remote areas are still to be surveyed.

The news release ends on an optimistic note. "The aftermath of Iniki here on Kauai will be a lengthy battle. However, we remain confident that the Garden will recover as a vital research and education resource for the study and conservation of tropical plants."

Anyone wishing to offer professional or other support to the recovery effort of NTBG can communicate by mail at the following address:

National Tropical Botanical Garden
Post Office Box 340
Lawai, Kauai, Hawaii 96765

By the time you receive this issue of the Bulletin the telephone lines to the Garden's Headquarters should be reconnected.

Telephone: (808) 332-7324
FAX: (808) 332-9765

MEETINGS - CONGRÈS

Adventitious Roots

A symposium on **The Biology of Adventitious Root Formation** will be held in Dallas, Texas, **April 18-22, 1993.** For information, contact: **Edith Franson, Exec. Sec. - Rooting Symposium, USDA Forestry Sciences Lab., Box 898, Rhinelander, WI 54501.**

Sir Joseph Banks

The Royal Society is sponsoring a symposium under the title **Sir Joseph Banks: a Global Perspective,** to be held in London, U.K., **April 22-23, 1993.** Information: **Scientific Meetings Secretariat, The Royal Society, 6 Carleton House Terrace, London, U.K. SW1Y 5AG.**

Ascomycete Systematics

The First International Workshop on Ascomycete Systematics will take place in Paris, France, **May 11-14, 1993.** Information: **First Ascomycete Systematics Workshop, Université de Paris 6e, Laboratoire de Cryptogamie, Boîte 33, 7 Quai St-Bernard, Bât. 50, F-75252 Paris, Cedex 05, France.**

Congrès annuel de l'Acfas

Le 61e Congrès de l'Acfas (l'Association canadienne-française pour l'avancement des sciences) aura lieu à l'Université du Québec à Rimouski **du 17 au 21 mai 1993.** Renseignements: **Acfas, 425, rue De La Gauchetière est, Montréal (Québec) H2L 2M7.**

Penn State Symposium

The 8th Annual Penn State Symposium in Plant Physiology will be held **May 20-22, 1993.** The title is **Signalling Systems in Plant/Organism Interactions,** with topics ranging from "Sexual signals in algae" to "Plant-plant airborne signals". Information: **Dr. Jack Shannon, Horticulture Dept., Penn State, University Park, PA 16802.**

CFBS Annual Meeting

The 36th annual meeting of the **Canadian Federation of Biological Sciences** will be at the Cleary International Centre in Windsor, Ontario, **June 17-19, 1993.** Information: **Ms. Crystal Hache, 360 Booth St., Ottawa, ON K1R 7K4.**

Ecological Society of America

The 1993 annual meeting of the Ecological Society of America will be held in Madison, WI, from **July 31 to August 4.** For information, contact the Program Chair for ESA: **Dr. Dennis Whigham, Smithsonian Environmental Research Center, Box 28, Edgewater, MD 21037.**

Pollination Symposium

An **International Symposium on Pollination in the Tropics** is to be held in Bangalore, India, **August 8-13, 1993.** For information, contact: **Dr. K.N. Ganshaiah, Sec. ISPT, Dept. of Genetics and Plant Breeding, University of Agricultural Sciences, Bangalore 560 065, India.**

Mycorrhizae Meet

The University of Guelph will host the **9th North American Conference on Mycorrhizae, August 8-12, 1992.** For information, contact: **R.L. Peterson, Dept. of Botany, University of Guelph, Guelph, ON N1G 2W1.**

Tree Reproduction

A meeting on **The Biology and Control of Reproductive Processes in Forest Trees** will be in Victoria, B.C., **August 15-20, 1993.** Information: **Stephen D. Ross, B.C. Ministry of Forests, Research Lab., 1320 Glyn Road, Victoria, BC V8W 3E7.**

Genetics Congress

The **17th International Congress of Genetics** will be in Birmingham, U.K., **August 15-21, 1993.** Information: **D.A. Smith, Research Support & Industrial Liaison, University of Birmingham, Edgbaston, Birmingham, U.K. BI5 2TT.**

Plant Amino Acids

Amino Acids and their Derivatives in Higher Plants is the title of a meeting to be held at Rothamsted Experimental Station, Harpenden, U.K., **September 1-3, 1993.** For information, contact: **Dr. R.M. Wallsgrove., Biochemistry and Physiology Department, Rothamsted Experimental Station, Harpenden, U.K. AL5 2JQ.**

Issued quarterly (January, April, July, October) and sent to all members of CBA/ABC. Non-members and institutions may subscribe at a price of $25.00 per annum post free (Overseas airmail: add $10.00). Cheques and money orders (in Canadian funds ONLY) should be made payable to "**The Canadian Botanical Association**" and addressed to the Editor.

Advertisements for **Positions Available** 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.**

Veuillez aviser le trésorier de tout changement d'adresse pour assurer une livraison ininterrompue du bulletin.
To ensure continuous delivery of the Bulletin please notify the Treasurer promptly of any change of address.

Copy for the April Bulletin must be received before: 15 March, 1993.

Les soumissions pour le bulletin d'avril doivent arriver au plus tard le 15 mars 1993.

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