

THE CANADIAN BOTANICAL ASSOCIATION

BULLETIN

DE L'ASSOCIATION BOTANIQUE DU CANADA

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

January / janvier 1995
Volume / tome 28
Number / numéro 1



ISSN 0008-3046

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Guelph

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

Another volume of the Bulletin begins ... and I did warn you that I might make some changes. Actually I've only tinkered with the design of the first page this time. You might give me some feedback on whether you prefer this page to the previous design (I still have the template for the old design).

Patron

This will be the last time we can list the present Governor General as our Patron since we must obtain the official approval of the patronage of the new Governor General, who takes office February 8, 1995.

Contents

We must be in a bit of a winter doldrums, since it has been a struggle to fill up the 16 pages allotted for this issue. For some reason (perhaps everyone is too busy with their own problems) there have been few contributions of material for this Bulletin. I have included the Minutes of the Calgary AGM, which probably should have been in the last issue, but couldn't be fitted in. We also have our usual complement of pre-meeting announcements (Student

Awards, Call for Resolutions) which appear in each January issue, and our regular presentations of Book Reviews, Plant Press and Meetings. Incidentally, I have it on good authority that there are some non-botanist spouses out there who regularly sneak a peek at the Plant Press and some other pages.

Reviewers

I would like to thank those who volunteered as reviewers (my E-mail was really smoking for a few days). My inventory of review books was just about cut in half. We moved out volumes by Endress, Schlegel, Killham, Peyton, Horst and Swings & Civerolo. The remaining volumes listed in the October Bulletin are still available for reviewing. [Oh, no! ... you didn't throw it out already, did you! Naughty.]

Ballot

On page 8 you will find a request for funding to partially support publication of a list of Canadian systematists and their publications. This request was discussed at the Annual General Meeting in Calgary but could not be formally approved by a vote because the meeting was running late and people were leaving to go to hear various papers (hence, no quorum of members remained). The Board of Directors decided that a mail ballot would be sent to all members asking their opinion about the provision of the requested funding. The format and rationale of the publication are described on page 8. Please read the page, complete the enclosed ballot, and return it to the Secretary by March 15, 1995.

Guelph - June 1995

Registration and abstract submission materials for the next Annual Meeting in Guelph are mailed with this issue of the Bulletin. Please read them carefully and take note of the deadlines. Students planning to enter competitions for awards should read the descriptions of eligibility and procedures in this issue of the Bulletin and take appropriate action. Note that this year we will be holding a joint meeting with the CSPP/SCPV. If there are any problems you wish to have clarified, communicate with our Vice President, Doug Larson, whose contact information is listed on the last page of this Bulletin.

Membership List Changes

Here are some additions and changes which should be made to the Membership list which was sent with the last issue of the Bulletin.

Melanie Jones ... Change E-mail address to:
mjones@okcins.okanagan.bc.ca

John Klironomos ... assures me that he is no longer a student, but is now a Research Associate at San Diego State University. The full citation of his ZIP code should be 92182-0057. Additional contact information includes:

Telephone: 619-594-4460

FAX: 619-594-5676

E-mail: klironom@sunstroke.sdsu.edu

Hugues Massicotte ... E-mail address: hugues@unbc.edu

J.C. Ritchie ... change E-mail address to the following:
jcr@aber.ac.uk

Jim Traquair ... E-mail address should be:
traquairj@em.agr.ca

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**Minutes of the Annual General Meeting
Wednesday, June 29, 1994,
University of Calgary**

1. The meeting was called to order at 12:12 pm.
2. **MOTION:** (Sylvia Taylor, Iain Taylor) That the minutes of the 1993 Annual General meeting held at Ames Iowa be adopted as circulated. Carried.
3. Business arising from the minutes. None.

4. Reports of Officers:

a. President (U. Posluszny) - circulated report published in July Bulletin

b. Past-President (P. Catling) - Nominating Committee
The following slate of officers and Directors, to serve the association for the period of 1994-1996 was presented for approval by the membership:

C. C. Chinnappa - President-Elect
Jean Gerrath - Secretary
Arthur Davis- Director
James Kemp- Director
Ellen Macdonald- Director

MOTION: (Paul Catling, Jennifer Shay) that the above slate be approved and accepted to serve the association. Carried.

We are still working towards appointing an archivist to replace Eric Haber. In the meantime, we should consider changing our permanent address. This must be done by changing the by-laws, since they state what our permanent address shall be.

c. President-Elect (Keith Winterhalder)

This year there were 20 competitors for the Cinq-Mars Award. Because of the difficulty of having the judges moving from session to session, it was suggested that all of the competitors' papers be scheduled for one room, in a block. It was pointed out that this might cause problems for the sections, since student papers are an important part of the sections' scientific contributions.

Local committees were reminded of the importance of checking abstracts very carefully so that all student entries are marked so, and are scheduled appropriately.

It was also recommended that students be allowed to enter only 1 paper in the competition each year, and that students should be members. Jennifer Shay suggested that supervisors should encourage their students to join, and should pay their memberships.

d. Vice-President (C. C. Chinnappa)

The Calgary meeting appears to be financially healthy, and a more detailed report will be given by the end of the meeting. Participant numbers can be broken down as follows:

179 registrants (incl. 40 students)
11 accompanying registrants
22 graduate student volunteers
This makes a total of 212 participants.

MOTION: (Iain Taylor, Keith Winterhalder) That extreme thanks be extended to the local committee for their excellent work in organizing this meeting. Carried.

e. Secretary (Jean Gerrath) -- circulated report published in the July Bulletin

f. Directors -- report was circulated to attendees of AGM

g. Editor (Joe Gerrath) -- report published in July Bulletin

h. Treasurer (Christian Lacroix)

Membership by categories

Life	2
Retired	32
Student	53 (many of whom are sponsored by their supervisors)
Regular	185
Total	272

These numbers include 53 new members.

The Treasurer asked for guidance from the sections with regard the fate of the money in their various endowment funds. The following points were made: our cash disbursements are adequate; there are testamentary constraints with regard to the fate of the money in the Weresub Fund; and there may be a window (1994 or 1996) on the establishment of Endowment funds. The terms will have to be checked.

The Treasurer's Financial Statement was circulated. [published in the July issue of the Bulletin]

It was suggested that we might wish to use some of our year-end balance to augment the student awards funds.

MOTION: (Sylvia Taylor, Larry Peterson) That, of whatever money is decided can be spared for awards, 70% be allocated to the Macoun fund, and the remaining 30% be divided equally among the new student awards (the Ecology, Steeves, and Porsild). Carried.

MOTION: (Nancy Dengler, Tim Dickinson) That the Treasurer's Report be accepted. Carried.

5. Conservation Committee -- circulated report published in the July Bulletin

- it was reported that there are some problems with communication with the committee this year, due to the changeover in Chairs.

- it was noted that Alberta needs a more well-developed system with regard to protected sites. This would help the committee in giving more support.

The question of what the response was to last year's emergency resolutions with regard to the Canadian Museum of Nature was raised. Apparently a Parliamentary committee has been set up. Our input was helpful, but progress has been slow. There will be changes made to the Board of Directors.

6. Science Policy Committee

Members were reminded that there is a Science Policy Committee, chaired by the Past President. Other members are Taylor Steeves and Ernie Brodo. It was suggested that a note reminding members of this should be placed in the Bulletin. The committee will continue to keep in touch with CFBS.

7. Membership Committee (Larry Peterson)

The Chair wrote letters over the past year to several people whose memberships had lapsed. Sometimes this resulted in irate replies.

Chair has resigned, and suggested that one of the Directors take over as chair.

8. Development (Jean Gerrath)

The exact amount of money raised by the sale of t-shirts, pins, and the auction, is not yet known, but it will amount to about \$600 (of which \$176.50 came from the auction). This will go into the Macoun Fund.

MOTION: (Tim Dickinson, Iain Taylor) That CBA/ABC add a new category of membership; the corporate sustaining membership, with annual dues being set at \$1000, \$950 of which is tax receiptable. Carried.

This would target companies such as supply houses. This may include the up front provision of our mailing list. The Treasurer should be empowered to consult a tax lawyer about this. The Development committee would have to inform the Section Chairs annually that this should be a policy. This will involve a by-law change to our membership categories.

9. Future Meetings

a. 1995 -- Guelph (Doug Larson)

- plans are proceeding smoothly, and there are many people working on the local committee
- the tentative schedule was presented, and concern was expressed at the lack of field trips. Members suggested that pre-or post-conference field trips should be included, and possibly a symposium on biodiversity.

b. 1996 -- Charlottetown (Christian Lacroix)

- the meeting will probably be the last week of June, likely starting on a Saturday.
- there will be many field trips.

c. 1997 -- Montréal

- the meeting will be held jointly with the Botanical Society of America, but AIBS will not likely be there.
- the new building will likely be ready by then.

d. 1998 -- ?Saskatoon possibly

- Vipen Sawhney would be the local contact, and Art Davis, Taylor Steeves, and Vern Harms could help. Thus it will likely proceed.

e. 1999 -- St. Louis, MO August 1-7 (International Botanical Congress)

- they will want help with their program committee. We will have to think about who can be the contact person.
- we may not be able to meet separately

10. Call for nominations

Nominations were invited for the positions of Treasurer (1995-1997), and three Directors (One of whom must reside east of the Manitoba-Ontario border) (1995-1997).

11. Appointment of Auditors

MOTION: (Christian Lacroix, Sylvia Taylor) that Judith MacIntyre and James Kemp be appointed auditors. Carried.

12. Canadian Journal of Botany Report (Iain Taylor)

- circulated report published in July Bulletin
- papers from the Mycological Congress will be published as a supplement, and will be separate. The cost to libraries will be \$50.

13. Youth Science Fair

Was held in Guelph this year, and the judges were Usher Posluszny and Joe Gerrath. The money we give goes mainly to cover travel costs for the student participants.

14. Other Business

a. CFBS (Larry Peterson) - The CFBS (Canadian Federation of Biological Societies) has reorganized, and has asked us to consider re-joining their organization. We will face renewed pressure on this issue. The zoologists have left, but the Canadian Society of Plant Physiologists (CSPP) will be holding a mail ballot of its members, with the recommendation that they remain within CFBS. After some discussion, the consensus appeared to be that we would like to participate in their Science Policy issues, and maintain communications, but we would not seriously entertain rejoining at this time.

b. Canadian Biodiversity -- A Guide to current botanical specialists and literature. (Ernie Small)

This guide is being compiled through the biosystematics institute, and should be ready by March 1995. CBA was asked to support the publication of this document in the amount of \$1000, on the understanding that CBA would distribute it. The document would be distributed with the non-binding request for \$20, which would go to CBA.

After much discussion, it was noted that the afternoon scientific sessions had begun, and that there was no longer a quorum present. Thus this decision will have to go to a mail ballot of the membership.

MOTION: (Tim Dickinson, Christian Lacroix) that the meeting be adjourned. Carried.

PRIX LIONEL CINQ-MARS AWARD

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, as well as Canadian students at foreign institutions. The paper (one only per student) 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.

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, C.C. Chinnappa. 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 the University of Calgary 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 form that they wish to enter the Cinq-Mars Competition will be placed on the list of participants.

Please note that a copy of the abstract form should be sent to:

Dr. C.C. Chinnappa
Department of Biological Sciences
University of Calgary
Calgary, AB T2N 1N4
FAX: (403) 220-9311

Chaque année l'association canadienne de botanique décerne un prix pour la meilleure communication orale présentée par un étudiant [ou une étudiante] 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, et tout étudiant canadien à une institution hors du Canada, est éligible. La communication (seulement une communication permise par étudiant) 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 désigné, 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'audiovisuel, clarté du texte).

La compétition Cinq-Mars est une partie importante de chaque rencontre annuelle. Nous comptons sur une forte participation à Calgary 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 résumé leur intention de participer à la compétition Cinq-Mars seront inscrits sur la liste des participants.

Veuillez faire parvenir une copie du formulaire de résumé à:

Dr. C.C. Chinnappa
Department of Biological Sciences
University of Calgary
Calgary, AB T2N 1N4
FAX: (403) 220-9311

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 an oral 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 1995 CBA/ABC Annual Meeting at the University of Guelph.
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, 1995**.
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. Keith Winterhalder
Department of Biology
Laurentian University
Sudbury, ON P3E 2C6
FAX: (705) 675-4859

4. The CBA/ABC President will appoint a **Student Awards Committee** to screen all applications, 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 in Guelph, Macoun Bursary winners will be officially announced and presented with an award certificate.



NEW PUBLICATION

Phase I Environmental Site Assessment. Canadian Standards Association, Publication Z768-94. \$55.00

This publication identifies the principles and practices for conducting a non-intrusive assessment of site contamination. It sets guidelines for collecting information about the site, evaluating the information and reporting the findings. It is intended for use by those doing the assessment and for those who have commissioned the assessment, including businesses, property owners or managers, insurance companies and financial institutions. Compliance with the Z768 standard provides greater assurance to interested parties that all appropriate investigations of a non-intrusive nature have been done.

Canadian Standards Association has offices in Vancouver, Edmonton, Winnipeg, Toronto, Pointe Claire and Moncton. For information on obtaining this publication contact: S. Kiraly, C.S.A., 178 Rexdale Blvd., Etobicoke, ON M9W 1R3. FAX: 416-747-2475.



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 19^e siècle au début du 20^e siècle, est allouée à un étudiant [ou une étudiante] gradué qui présente une communication orale dans le cadre de la compétition Lionel Cinq-Mars.

Eligibilité:

1. La compétition pour la bourse est ouverte **aux étudiants canadiens au Canada ou à l'étranger**. Les étudiants qui sont éligibles sont encouragés à remplir une demande même si la rencontre annuelle de l'ABC/CBA se tient à leur université.

2. Le concurrent doit présenter **une communication dans le cadre de la compétition Lionel Cinq-Mars** à la rencontre annuelle à l'Université de Guelph.

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

Procédure:

1. Les étudiants doivent faire parvenir leur demande pour la bourse de voyage **au plus tard le 1er mars 1995**.

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** qui doit également inclure une déclaration que l'étudiant en question est inscrit à un programme de maîtrise (M.Sc.) ou de doctorat (Ph.D.).

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

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

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

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

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

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 gagnants de la bourse Macoun seront avisés avant la date finale d'inscription 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 à Guelph, les gagnants de la bourse Macoun seront annoncés et un certificat leur sera présenté.

Traduction: Christian Lacroix.



VOTE

Request for partial support towards publication of "Canadian Biodiversity: a Guide to Botanical Specialists and Literature"

This work lists living Canadian botanists, particularly systematists, phytogeographers, and ecologists, and their publications related to vascular plants and bryophytes. (The possibility of conducting a parallel work on fungi is under exploration by the Mycology Section of CBA/ABC.) A brief account of this initiative of the Systematics and Phytogeography Section of CBA was published in CBA/ABC Bulletin 27(2): 29 (April 1994). It is expected to be 800 pages (400 leaves) in length, listing the publications of about 250 individuals, including numerous members of CBA. The guide is presently being assembled under Drs. E. Small and J. Cayouette, and is scheduled for completion in March 1995.

The proposal is to prepare 250 photostatic copies, at a cost of ca. \$3200.00, of which CBA would donate \$1000.00 (if approved by this ballot), and the remainder would be granted by Agriculture & Agri-Food Canada and perhaps others. The book would be distributed by CBA to those who agree to contribute an amount of the order of \$20.00 to CBA, and the majority of the 250 copies would be so distributed by CBA. All profits realized would go to CBA.

The guide is needed as a primary reference to biodiversity research in Canada. It is also important to document the leadership that Canadian botanists are playing in addressing the biodiversity issues currently of great concern to governmental and other funding agencies. The CBA, as the leading botanical organization of Canada, is the appropriate group to sponsor this documentation of one of the vital roles of Canadian botany.

Please complete the Ballot included in this Bulletin, and send (before March 15, 1995) to:

Dr. Jean Gerrath, CBA Secretary
Department of Biology
University of Northern Iowa
Cedar Falls, IA 50614-0421

VOTE

Demande de support financier partiel pour la publication de «Biodiversité canadienne: répertoire des botanistes actuels et de leurs publications»

Cet ouvrage répertorie les botanistes canadiens actuels, surtout les systématiciens, les phytogéographes et les écologistes, et leurs publications sur les plantes vasculaires et les bryophytes. (Il existe une possibilité que la Section de mycologie de l'ABC/CBA entreprenne un travail similaire.) Un bref compte rendu de cette initiative de la Section de systématique et de phytogéographie de l'ABC a paru dans un récent numéro du Bulletin de l'ABC/CBA (27(2): 29. Avril 1994). Cet ouvrage comprendra environ 800 pages (400 feuillets) et inclura quelque 250 personnes dont plusieurs membres de l'ABC. Ce catalogue est actuellement en préparation sous la direction des auteurs E. Small et J. Cayouette et devrait être complété en mars 1995.

Le projet prévoit de préparer 250 copies photocopiées, au coût d'environ 3200.00\$, dont 1000.00\$ proviendraient d'un don de l'ABC (s'il est approuvé) et la balance serait subventionnée par Agriculture et Agro-alimentaire Canada et peut-être d'autres sources. Le livre serait distribué par l'ABC à ceux qui accepteraient de lui retourner environ 20.00\$. De cette façon la plupart des 250 copies devraient être distribuées par l'ABC qui pourra ainsi en tirer certains profits.

Ce guide est attendu comme une source bibliographique majeure pour la recherche en biodiversité au Canada. Il servira également à documenter le rôle primordiale que jouent les botanistes canadiens auprès des organismes subventionnaires gouvernementaux et autres concernant les questions cruciales actuelles touchant la biodiversité. L'ABC, en tant qu'organisation botanique principale au Canada, est le groupe tout désigné pour parrainer cet ouvrage de documentation sur l'un des rôles vitaux de la botanique au Canada.

Veuillez retourner (avant le 15e mars 1995) le bulletin de vote ci-inclu à:

Dr. Jean Gerrath, Secrétaire de l'ABC
Department of Biology
University of Northern Iowa
Cedar Falls, IA 50614-0421

BOOK REVIEW

British Plant Communities. 3. Grassland and Montane Communities. Edited by J.S. Rodwell. Cambridge University Press, 1992.

In 1975, the National Vegetation Classification project was launched, initiated and then lead by Professor Donald Pigott of the University of Lancaster, with the aim to conduct research that would produce a systematic and comprehensive classification of British plant communities. A team of botanists was established and both literature searches and field work were carried out until, in 1989, after careful data collection and analysis using standard methods, descriptions and tabular summaries of over 250 natural, semi-natural and major anthropogenic communities in Great Britain were assembled for publication. Volume 3 of the 5 volume project deals with Grasslands and Montane communities. Volumes 1 and 2 covered Woodlands and Scrub, and Mires and Heaths, respectively.

One of the major objectives was to produce a Classification that could be used, in the field and the laboratory, as a framework for research, teaching, management, conservation issues, and land-use planning. The Classification was made available in draft form at an early stage, prior to publication, so that field ecologists could test it and suggest modifications. The final product has quickly become widely used both in research activities and in such applied uses as legal disputes over ecological assessment. Hill (1993) has produced computer software to make possible matching of field data with the Classification.

Few Canadian field botanists work in Britain, so these volumes will not serve much practical use for them. But they will find much of interest in the scientific and management processes that produced the Classification. Vegetation studies in Britain had been dominated by interests in dynamic process and responses to environmental variables, with little attention paid to the phytosociological aspects of plant communities, the major thrust of work in continental Europe. This book and its companion volumes mark a new development in British plant ecology whereby the systematic framework of plant sociology is combined effectively with data on spatial pattern, environmental variables, mapped distribution, and keys for field identification.

These volumes also cut through the vast, on-going debate among plant community ecologists about the nature of the community, ranging from "there is no such thing", to adherents of the predictable, recurring assemblage of plants. Here is a description of plant communities that is designed primarily for practical use and has become a powerful tool in resolving difficult questions of conservation and development. They will be of use in university teaching as excellent examples of comprehensive, well balanced descriptions of vegetation and its spatial and environmental context, and plant ecologists who are active in conservation will find much of value in their deliberations, while of course it would be unrealistic to suppose that a similar scheme could be developed for Canada. But local and regional schemes would be feasible and, ultimately, of great value as the need for sound decisions in conservation intensifies.

Hill, M. 1993. Tablefit version 0.0 for identification of vegetation types. Institute of Terrestrial Ecology, Huntingdon, U.K.

J.C. Ritchie, University of Toronto



Reviewer Wanted

The Bulletin Editor has received the following book for review. It will be sent to the first person who volunteers to write a review of it for publication in a future issue of the Bulletin.

Analysis of Phenolic Plant Metabolites
by Peter G. Waterman and Simon Mole
Blackwell Scientific Publications, Oxford. 1994
[A volume in the series, *Methods in Ecology*]

Several of the books listed in the October 1994 issue of the Bulletin are still available to anyone who wishes to write a review.

Philatelia Botanica

Countries around the world have increasingly featured flowers on their stamps, and one group of flowering plants that has become a favourite of stamp agencies is orchids. So many orchid stamps are now produced that there is a separate "topical" listing for them presented in the *Scott Stamp Weekly*. In the November (1994) issue of the *American Orchid Society Bulletin*, Dr. Roy S. Bigham Jr. has compiled and published a list of the orchid stamps issued in just one year, 1993. The list includes 128 stamps issued by 33 different countries. Notable among the issues is the first set of orchid stamps ever issued by Great Britain, a 5-value set featuring two *Dendrobium* species, a *Vanda* and a *Cymbidium* species, and a *Paphiopedilum* hybrid.

While many of the so-called "third world" states issue huge numbers of topical stamps to attract foreign buyers, this situation should not prevent us from enjoying the fine designs and printing quality which most of these stamps exhibit. In the following list of countries which issued orchid stamps in 1993 you will notice the conspicuous absence of Canada (and the United States). However, Canada is not immune to the lure of issuing topical stamps (e.g. the recent sets of fruit trees). Perhaps it is time for Canada to consider issuing a set depicting some of our native orchids.

Orchid Stamps of 1993 (listed by continent or region and country with number of stamps and/or souvenir sheets in parentheses).

Europe: Great Britain (5), Jersey (5), Hungary (2 + souvenir sheet), Ireland (4 + 2 souvenir sheets), Moldavia (souvenir sheet with one stamp)

Asia: Peoples Republic of China (2), Iran (1), North Korea (5 + souvenir sheet), Singapore (2 + souvenir sheet), Vietnam (4)

Oceania [Pacific island nations]: Indonesia (1), Micronesia (1), Nouvelle Calédonie (2 + souvenir sheet), Philippines (14), Samoa (3), Solomon Islands (4), Vanuatu (4)

Africa: Central African Republic (3 + souvenir sheet), Côte d'Ivoire (3), Kenya (5), Liberia (5), République Malgache (11 + 2 souvenir sheets), Nigeria (4), Seychelles (1), Tanzania (1), Uganda (1), Zimbabwe (4)

Central and South America: Barbados (4), Belize (4), Cayman Islands (4), Grenada (1 + souvenir sheet), Nicaragua (1), Venezuela (10 + souvenir sheet)

Contributor: J.F. Gerrath



Winter Ice Storms and Trees

There are several regions of Canada where winter storms bring freezing rain which coats the branches of trees, sometimes breaking off limbs or causing severe damage. The December (1994) issue of *Horticulture* has a summary of a research project carried out by foresters at the University of Illinois to determine which trees were most (and least) susceptible to ice storm damage.

The results probably would not surprise most botanists. It turns out that characteristics of the wood of the tree have little to do with the tree's resistance to damage from ice storms. The most resistant trees had either a conical shape or a low exposure of branch surface area. The least resistant trees usually had more open and extensive branching systems with higher exposure of branch surface area.

Among the most resistant trees are:

Acer platanoides
Catalpa spp.
Ginkgo biloba
Juglans nigra
Quercus alba
Thuja occidentalis
Tilia cordata
Tsuga canadensis

Among the most susceptible trees are:

Acer saccharinum
Celtis occidentalis
Gleditsia triacanthos
Prunus serotina
Robinia pseudoacacia
Tilia americana
Ulmus americana
Ulmus pumila

Trees which are in the intermediate range of susceptibility to ice storm damage include:

Acer rubrum
Acer saccharum
Fraxinus americana
Liriodendron tulipifera
Pinus strobus
Platanus occidentalis
Quercus rubra

Abstracted from "Trees on Ice" by Trish Wesley
Horticulture, December 1994



RECENT GRADUATES

University of Guelph Dept. of Botany

Stephen P. Bonser (M.Sc.) - "Intensity of competition and predation in relation to vegetation biomass." Advisor: Richard Reader.

Jennifer L. Bosy (M.Sc.) - "Effects of herbaceous litter on forb seedling emergence." Advisor: Richard Reader.

In'am El Hassani (M.Sc.) - "The mosaic disease of wheat infected with wheat streak mosaic virus (WSMV)." Advisor: Annette Nassuth.

Sandra Anne Kofalvi (Ph.D.) - "Wheat-streak-mosaic-virus-induced changes in phenolics, phenylpropanoid metabolism and cell wall integrity." Advisor: Annette Nassuth.

University of Guelph Department of Crop Science

Carol Bast (M.Sc.) - "*In vitro* response over four cycles of introgression of somatic embryogenesis in alfalfa." Advisor: S.R. Bowley.

Elroy Cober (Ph.D.) - "Performance of tall determinate and indeterminate soybean and response of near-isogenic lines to photoperiod and light quality." Advisor: Jack Tanner.

Eva C. Constabel (Ph.D.) - "Evaluation of a DNA probe for the quantitative detection of bacteria causing common bacterial blight in bean and its application in a breeding program." Advisor: T.E. Michaels.

Denise E. Dewar (M.Sc.) - "Triazoles as stress-protectants for Ontario-grown spring canola." Advisor: D.J. Hume.

Anita Dieleman (M.Sc.) - "Modelling pigweed (*Amaranthus* spp.) interference in soybean (*Glycine max* (L.) Merr.) and determining decision rules for postemergence pigweed control." Advisor: Clarence Swanton.

Igor Falak (M.Sc.) - "Analysis of a barley doubled haploid population for resistance to powdery mildew." Advisor: D.E. Falk.

Lisa James (M.Sc.) - "Random amplified polymorphic DNA (RAPD) study on resistance to net blotch disease in barley." Advisors: Ken Kasha and S.J. Molnar.

J.P.K. Parker (Ph.D.) - "Genetic studies on self-incompatibility as a pollination control system in oilseed rape (*Brassica napus* L. ssp. *oleifera*)." Advisor: W.D. Beversdorf.



CALL FOR RESOLUTIONS FOR THE ANNUAL GENERAL MEETING, GUELPH, JUNE 27

Members who wish to submit Resolutions to be included on the agenda of the CBA Annual General Meeting in Guelph should take note of the following rules (extracted from By-Laws 68-77).

Resolutions require a mover and 4 seconders, all of whom must be CBA members in good standing. They must be submitted to the Secretary of CBA at least 10 weeks before the Annual General Meeting (by April 17, 1995). All resolutions must be accepted by the Board of Directors before they are placed on the agenda of the Annual General Meeting, and may be returned for revisions if they do not conform to the guidelines for Resolutions specified in By-Laws 68-77.

PROPOSITION DES RÉOLUTIONS POUR L'ASSEMBLÉE GÉNÉRALE ANNUELLE, GUELPH, LE 27^e JUIN

Les membres qui désirent proposer une résolution pour inscription à l'ordre du jour de l'assemblée générale annuelle de l'ABC à Guelph doivent prendre note des règlements suivants (extrait des règlements 68 à 77 de l'Association).

Les résolutions requièrent un proposeur et quatre secondeurs tous membres en règle de l'Association. Elles doivent être soumises au secrétaire de l'ABC au moins dix semaines avant l'assemblée générale annuelle (au plus tard le 17^e avril 1995). Toute résolution doit être acceptée par le Bureau de direction avant d'être inscrite à l'ordre du jour de l'assemblée générale annuelle. Si la résolution ne répond pas aux exigences requises dans les règlements 68 à 77, elle sera retournée au proposeur avec indication des révisions à faire.

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.



Graveyard Shift Best for Plowing

According to Steve Radosevich (Oregon State U.) and two Argentinian researchers, farmers should do their plowing at night in order to reduce weed populations without using herbicides. Buried seeds of many weeds become light sensitive and require only a brief flash of sunlight to trigger germination. Plowing during daylight hours can easily provide this stimulus. The researchers claim a reduction of 40-70% in seed germination for night plowing when compared to daylight plowing. There are, however, some weed seeds which are less light-sensitive and night plowing continued for several years would produce a weed population dominated by these kinds of weeds. [Thanks to Chris Maxwell for submitting this item]

Ontario Farmer, March 8, 1994



Remarkable Mosquito-Repellant Hybrid

Thanks to Sylvia Taylor for this strange item. The German firm, Brettschneider, which specializes in mosquito-repellant products, has launched the distribution of a repellent hybrid (*Pelargonium citrosum Vanleeni*) bred by Dutch horticulturist Dirk van Leenen. O.K. so far ... but the article then notes that this is "a hybrid of African geranium and Asiatic grass" (!!). Is there anybody out there who knows more about this remarkable hybrid?

Horticulture Week, Sept. 15, 1994



Garry Oak Endangered

Numbers of B.C.'s only native oak (the Garry Oak) have dwindled over the past 20 years because of urban sprawl and farming, and it is now considered an endangered species, according to Nanaimo environmentalist, Bill Merilees. Citizens are being encouraged to gather acorns and plant them in their own yards. The Garry Oak dates from before the last ice age.

Globe and Mail, October 22, 1994



Jurassic Bark!

Several newspapers featured this story about the discovery of a "living fossil" tree in Australia. An off-duty National Parks officer hiking in a rugged part of Wollemi National Park in the Blue Mountains about 200 km west of Sydney encountered some trees he could not identify. His samples created a stir among botanists at Sydney's Royal Botanic Gardens, who have named it the "Wollemi pine" ("wollemi" is an aboriginal term meaning "look around you"). It is not a true pine, but is a third living genus of the Araucariaceae (to be officially named in the journal, *Telopea*, in 1995). The closest living relative is probably *Agathis*, but the new genus has much more in common with extinct Cretaceous and early Tertiary trees (e.g. *Araucarioides*). Since there were only 39 trees found, the RBG botanists refuse to give the exact location of the grove (Wollemi National Park extends over 485,000 hectares). They had tried to suppress the find since the discovery in August but the news eventually leaked to the press and blew the whole operation. Information posted on bionet newsgroups (by Ken Hill of the RBG, Sydney) indicates that there are 23 adult and 16 juvenile trees growing in a deep, very wet and sheltered gorge. About 40 seeds have been collected and (as of late-December) one seed had germinated for researchers at the Annan Botanical Garden (southwest of Sydney). Tissue culture experiments, studies on DNA and morphological research are also progressing. Some horticulturists already think that the Wollemi pine, some specimens of which reach a height of 130 feet (not the 210 meters in one newspaper account!) and are estimated to be 150-200 years old, could become a valuable specimen tree in the same way that the monkey puzzle tree and Norfolk Island pine have.

New York Times, December 15, 1994



Nettles taking over England

"A rash of giant stinging nettles is breaking out over England, claim botanists." Don't blame your editor for that catchy intro to this story [submitted by Joan Venn] about what has become the commonest flowering plant (*Urtica dioica*) in Wiltshire and some other English counties. Historically confined to field edges and phosphate-rich ground (such as graveyards), the stinging nettle is taking advantage of increased phosphate pollution from agricultural runoff and sewage effluent. It is "rampant on canal and river banks; by roads, tracks and field edges; in hedges and ditches; on dumps and waste sites; in woods, copses, even downland", according to botanist, Jack Oliver. To add insult to injury, among the plants disappearing beneath its shade is the dock (*Rumex obtusifolius*), the leaves of which generations of "stingees" have used to relieve the nettle's itch. English Nature, a government conservation agency, has asked water companies to remove phosphates from effluents discharged by several sewage works as a control measure.

New Scientist, October 29, 1994



Plant Rights!

"If you cut a lettuce you are being awfully cruel. Plants are sensitive organisms." These words were part of a talk at a British conference by Prof. Malcolm Wilkins of Glasgow University. They were a response, in part, to students who have told him that they are vegetarians because they don't like animals being killed for food. However, Wilkins told the conference that plants are much more sophisticated than ordinary people think and he implied that vegetarians are being cruel to plants when they devour a bowl of salad or slice a juicy tomato. [Thanks to Chris Maxwell for this item]

Peterborough Examiner's "Odd Spot", Sept. 10, 1994



Hi-Tech Spuds

Badly handled potatoes develop brown patches (bruises) caused by the production of melanin. Browning involves the enzyme polyphenol oxidase and can be suppressed by using sulphites. However, recently the safety of sulphites has come under the scrutiny of the US-FDA. A hi-tech solution to the problem is reported in a recent issue of *BioTechnology* by a Dutch research team from the biotech firm, Keygene. The gene for polyphenol oxidase was isolated and the "antisense" gene was reintroduced to produce a potato which will not bruise. Researchers think that this strategy can be used to prevent enzymatic browning in several other food crops.

The Times of London, November 21, 1994



Defense and Counterattack

Bursera, a Mexican desert shrub, whose resins were used by the Mayans in ceremonial incense, has an interesting strategy, recently described in *Ecology*, to foil insects. Flea beetle larvae eating near the outer edge of the leaf are greeted with a jet of nasty, sticky chemicals (may squirt up to 2 m away). Surviving larvae, however, quickly learn to sever veins near the leaf base, thus disarming the defenses of the plant.

Carol Yoon, New York Times, December 6, 1994



A Race against Extinction

Scientists are in a race against time and loggers who are wiping out possible sources of medicinal compounds as they cut down the forests of Borneo. As an example this article cites the story of *Calophyllum lanigerum*, a tree whose leaves were collected by a US field team in 1987. Preliminary tests showed that it contained anti-HIV compounds. However, when the team returned to get more leaves they found that their tree had been felled. Luckily they were able to find another tree several miles away. There are now several projects which have been set up to grow (in fenced and guarded plantations) seedlings of *Calophyllum* and of many other Borneo plants which have yet to be tested for bioactive compounds. Continuing studies on *Calophyllum* have shown that its leaves contain a compound (named calanolide-A) which is able to destroy HIV without harming healthy cells in tissue culture.

Philip Shenon, New York Times, December 6, 1994



Linnaeus and his Binomials

How did Linnaeus get the idea for the binomial system of biological nomenclature? A Harvard science historian, Lisbet Koerner, thinks it originated in a graduate student project to pinpoint the best fodder plants for farm animals. In this project (carried out four years before *Species Plantarum* but published in 1749 as *Pan Svecicus*) the students followed an animal all day, writing down the name of each plant that was eaten. They used a two-part shorthand for each of the 850 fodder plants identified, rather than the cumbersome species descriptions which existed then. Koerner, who considers Linnaeus "a very underresearched scientist" is currently working on a biography of the father of botanical nomenclature. [Thanks to Joan Venn for this item.]

Science, November 11, 1994



Vegetarian Deficiency

Vegetarians have a diet which lacks an important defence against heart disease. A graduate student project at the University of Guelph, supervised by Nutritional Sciences professor, Bruce Holub, and research associate, Julie Conquer (herself a vegetarian), showed that vegetarians have 40% lower levels of DHA in their blood. DHA (docosahexaenoic acid) is an omega-3 fatty acid that is important for vision, brain functioning and reduction of platelet clumping related to heart disease. It is mainly obtained by humans from seafood and freshwater fish. Vegetarians can consume flaxseed, canola and soybean oils and obtain α -linolenic acid, but only a small amount (5%) of this acid is converted by the body to DHA. Infants fed formula lacking DHA show a difference in their visual acuity, indicating that vegetarianism in young children could have serious effects on their overall health as adults. The Guelph research team is now conducting tests on several vegetarians regarding a number of heart disease risk factors using a microalgae-derived source of DHA, which could be acceptable to vegetarians as a food supplement.

For non-vegetarians another research project in Holub's lab showed that hens fed ground flaxseed lay eggs with high concentrations of DHA and α -linolenic acid, both omega-3 fatty acids. The minimum daily requirement of omega-3 acids is 1100 mg/day for women and 1400 mg/day for men. One enriched egg provides about 350 mg of omega-3 acids. Enriched eggs would cost more than ordinary ones, but Holub estimates that they could capture 10-15% of the market.

K.-W. Record, November 2, 1994



Kiss of Death for Lung Cancer?

In addition to being a prime inducer of Christmas smooching, mistletoe may be an effective agent against advanced cases of lung cancer, according to doctors at Desert Hospital in Palm Springs, California. Clinical trials of Navelbine, a mistletoe derivative, have shown significant reductions in tumors in 35% of treated patients (5% show complete remission). The Hospital's Medical Director stated, "It is the least toxic and most effective agent that we have right now for lung cancer".

Kitchener-Waterloo Record, December 26, 1994



"Rootfuel"

Thanks to Joan Venn for this submission about a possible solution for chronic respiratory infections which plague Navajo families living in smoke-filled hogans (traditional dwellings). The root of the buffalo gourd (*Cucurbita foetidissima*), which is already used as fuel by villagers in Latin America, Asia and Africa, is being tested as a smokeless fuel on the Navajo Indian Reservation. The roots contain almost no lignin, which is thought to be the source of most smoky products from burning wood. The "rootfuel" burns longer than wood, the women find that they can prepare a meal in the same time, and there is little smoke. The roots can be grown in one season on less land than would be required for growing wood and they can be almost completely dried for storage. The project is now trying to work out the best methods for growing the crop and trying to select the best strains of buffalo gourd for use in larger trials.

New Scientist, October 15, 1994



Ancient Fungal Clone

"Leaf-cutter ants are the dominant herbivore in the Neotropics, taking about 20% of all the fresh-leaf biomass there. It would be fair to say that ants are the main reason it's hard to do agriculture in the Neotropics." This statement was made by Ted Schulz, grad student at Cornell and co-author of two recent papers in *Science* on the symbiosis between leaf-cutting ants and their fungus. There are about 200 species of leaf-cutting, or "attine", ants which have established a mutualistic relationship with fungi. The coevolution of attine ants and their fungi is estimated to have existed for about 50 million years. The ants provide leaf biomass for the fungus and the fungus produces swollen, nutrient-rich hyphal tips which are nipped off by the ants. E.O. Wilson, in his book, *The Ants*, calls this symbiosis "one of the major breakthroughs in animal evolution". Ted Schulz was involved in a molecular study which analyzed the DNA of ants and fungi from several different Neotropical ant colonies: The results indicate that most attine ants in Central and South America have been utilizing a single fungal clone for about 25 million years. A "starter" piece of the clone is always taken along when a new ant colony is established. The fungus belongs to the Family Lepiotaceae, but cannot be identified further because it has lost the ability to produce reproductive structures (mushrooms) used for identification.

Natalie Angier, New York Times, December 15, 1994



Mighty Mites Saving Tapioca

In North America the most commonly used product of the cassava plant is tapioca. For 200 million southern Africans, however, cassava is an important staple food, which is endangered by infestations of the cassava green mite. Now a predatory mite from Brazil is being introduced to African plantations and it is hoped that this action will protect the crop from serious damage.

Globe and Mail, November 5, 1994



Ultra-Super Rice Coming

The green revolution continues. At a time when warnings abound that serious food shortages are imminent in Asia, plant breeders at the International Rice Research Institute have unveiled a new variety of rice which has the potential to increase yields by 25% or more (possibly 13 tonnes/hectare rather than around 10 tonnes/hectare at present). The new rice differs from current rice varieties by being able to produce seed heads on every shoot and by having more than double the number of fruits per seed head. The new plants are also more compact, allowing denser plantings, and are more tolerant of less than ideal growing conditions. However, breeders must still build in pest and disease resistance in order to achieve the hoped-for increases in yield. It will probably be at least another five years before the new "ultra-super" rice is ready for widespread farming. [Thanks to Joan Venn for submitting this story.]

New Scientist, October 29, 1994



Good Old Garlic Strikes Again

This article (submitted by Joan Venn) is not your ordinary herbalist's homily about the marvels of garlic. Researchers at ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) have found that a simple garlic spray can be 100% effective against the ergot fungus of sorghum (*Claviceps sorghi*) if sprayed at the correct time. The pesticidal properties of allicin, the active ingredient in garlic, are well known. The spray protects the crop from infection rather than serving as a cure for existing infection. Sorghum is grown on about 44 million hectares worldwide, producing about 58 million tonnes. The ergot fungus is one of the worst diseases of the crop and plant breeders have had little success in producing ergot-resistant varieties. The only problem with the garlic spray is that rain washes it off easily. Researchers are trying to add an ingredient that would make the garlic stick to the plant better and are also testing quicker and easier methods of processing large quantities of garlic.

New Scientist, November 5, 1994



Eat Your Veggies!

Two recent studies publicize the benefits to the human body provided by antioxidant compounds (e.g. carotenoids such as β -carotene) obtained by eating green and yellow vegetables. Researchers at the University of North Carolina, reporting on a 13-year study of 1,899 men with high levels of cholesterol, say that nonsmokers with high blood levels of carotenoids had 70% fewer heart attacks and deaths than men with low levels. A Harvard group found that people who ate the most leafy vegetables were 43% less likely to develop macular degeneration, an age-related eye disorder.

Globe and Mail, November 12, 1994



MEETINGS / CONGRÈS

Plant Mitochondria

A conference entitled **Plant Mitochondria: from Gene to Function** will be held at Duke University (Durham, North Carolina), **April 7-12, 1995**. Obtain further information from: **Jim Siedow, DCMB-Botany, Box 91000, Duke University, Durham, NC 27708-1000** [FAX: 919-613-8177, E-mail: jsiedow@acpub.duke.edu].

Plant Architecture

The Evolution of Plant Architecture is the title of a conference to be held in London, U.K., **April 19-21, 1995**. For information, contact: **Dr. A.R. Hemsley, c/o The Linnean Society, Burlington House, Piccadilly, London, U.K. W1V 0LQ**.

Madrone Symposium

A one-day symposium with the title, **The Decline of the Pacific Madrone: Current Theories and Research Directions**, will be held at the University of Washington Center for Urban Horticulture on **April 28, 1995**. The symposium will discuss the natural ecology, pathology, landscape performance and propagation of the Pacific Madrone (*Arbutus menziesii*). For information, contact: **Paul West, Seattle Dept. of Parks and Recreation**, by FAX [206-684-4126] or E-mail [pwest@eskimo.com].

Northeast Algal Symposium

The Northeast Algal Society will convene its **24th Annual Symposium** at the Woods Hole (Massachusetts) Marine Biological Laboratory, **April 29-30, 1995**. This year's Guest Lecture will be given by Robert R.L. Guillard, a long-time algal researcher based at the MBL. For more information on the Society and its meeting, contact either: **Gary Wikfors, NOAA, National Marine Fisheries Service, 212 Rogers Ave., Milford, CT 06460**, or **Dorothy G. Swift, Center for Atmospheric Studies, Graduate School of Oceanography, University of Rhode Island, Kingston, RI 02881**.

Herbarium Workshop

The Society for the Preservation of Natural History Collections is holding a workshop, **Managing the Modern Herbarium**, in Toronto, **June 5-6, 1995**. Obtain further information from: **Deborah Metsger, Department of Botany, Royal Ontario Museum, 100 Queen's Park Crescent, Toronto, ON M5S 2C6** [FAX: 416-586-5516].

Arabidopsis Conference

The **Sixth International Conference on Arabidopsis Research** will be held at the University of Wisconsin - Madison, **June 7-11, 1995**. For information, contact: **D. Kyle Willis, USDA/ARS Dept. of Plant Pathology, University of Wisconsin, Madison, WI 53706** [E-mail: dkw@plantpath.wisc.edu].

Gordon Research Conference

A Gordon Research Conference on **Plant Cell Genetics and Development** will be in Wolfeboro, New Hampshire, **June 11-16, 1995**. The conference is limited to 135 participants and will concentrate on apical meristems and primordia. Several eminent plant development researchers (including Ian Sussex) will lead discussion sessions. Information: **Gordon Research Conferences, University of Rhode Island, P.O. Box 984, West Kingston, RI 02892-0984**.

CSM Annual Meeting

The **Canadian Society of Microbiologists** will hold their Annual Meeting in Kingston, ON, **June 11-15, 1995**. For information, contact: **Dr. A. Kropinski, Department of Microbiology, Queen's University, Kingston, ON K7L 3N6**.

AIBS Annual Meeting

The **46th AIBS Annual Meeting** will be in San Diego, California, **August 6-10, 1995**. This year's theme is **Science and Ethics**. Meeting with AIBS this year are: **American Fern Society, American Society of Plant Taxonomists, Association for Tropical Biology, Botanical Society of America, International Society for Ecological Modelling, International Society for Environmental Ethics, Mycological Society of America and Torrey Botanical Club**. Registration package may be obtained from: **AIBS, Central Station, P.O. Box 27417, Washington, DC 20077-0038**.

PSA Annual Meeting

The **1995 Annual Meeting of the Phycological Society of America** will be held at the Breckenridge Hilton Resort, about 85 miles west of Denver, Colorado, **August 6-10, 1995**. Obtain further information from: **Paul Kugrens, Colorado State University** by FAX: 303-491-0649 or by E-mail [pkugrens@lamar.colostate.edu].

Tropical Bryophytes

An international conference on **Tropical Bryophytes: Biology, Diversity and Conservation**, will be in Mexico City, **August 7-12, 1995**. Information may be obtained from: **Claudio Delgado** [FAX: [52] 5/ 550-1760, E-mail: moya@redvax.dgsca.unam.mx].

DELTA Workshop

Dr. Mike Dallwitz of CSIRO will lead a **Workshop on DELTA (DEscriptive Language for TAXonomy)**, an internationally recognized standard for coding descriptive taxonomic information, at the Harvard University Herbaria, **September 12-15, 1995**. Further information may be obtained from: **Dr. David E. Boufford, Harvard University Herbaria, 22 Divinity Ave., Cambridge, MA 02138**. [E-mail: boufford@huh.harvard.edu].

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

Copy for the April Bulletin must be received before: April 1, 1995.

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*Publication date for the October Bulletin:
November 17, 1994*

*Date de publication pour le bulletin d'octobre:
le 17 novembre 1994*