THE CANADIAN BOTANICAL ASSOCIATION

BULLETIN

L'ASSOCIATION BOTANIQUE DU CANADA

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PATRON

HER EXCELLENCY THE RIGHT HONOURABLE JEANNE SAUVE,
P.C., C.C., C.M.M., C.D., GOVERNOR GENERAL OF CANADA

PATRON

SON EXCELLENCE LA TRES HONORABLE JEANNE SAUVE,
C.P., C.C., C.M.M., C.D., GOVERNEUR GENERALE DU CANADA

PRESIDENT'S MESSAGE

Last year, Iain Taylor, encouraged all members of the CBA/ABC to bring botanical sciences out to the public. Surveys have shown that popularized science is well received, and that several people consider it an important aspect of their culture. There is also a strong favorable current towards preservation of our natural heritage. This message is even more relevant today, in a period of severe budget cuts at all levels of government. Increased awareness in the public may bring a wider support for proper financing of research activities across Canada. Which brings me to the heart of my topic.

Budget cuts, both in university functioning and research financing, have deeply affected the research system across the country. Positions are lost through retirement, or whole facilities are closed. Young scientists cannot find employment, while researchers are becoming older, on average. Even U.R.F. programs might be gradually suppressed. Policies for hiring the best young Canadian scientists become more and more pertinent. Not to consider them when positions open may be viewed as an admission of failure on our part. But these are not the sole consequences of reductions in financing.

The current federal government's matching fund policy for funding the national research agencies should not lull us with a false sense of security, and this policy falls short of electoral promises. Instead of increased support for research, a levelling off in the level of funding in terms of dollars constant is observed, and this, only provided the matching plan works. We are uncertain of being able to reach the objective by 1990, and no review of the program is expected for a few years. All scientists and universities are thus forced to attempt to make the plan succeed, without regards to its impact on researchers, smaller institutions, or a balanced research system across the country. Another temptation might be to raise the "standards" by which money is distributed among researchers, with lurking in the background, the danger brought about by orthodoxies and rigid thinking as to what is science, and how it should be done. In a bid for "internationally competitive" science, might we not loose from sight the value of knowing our own country, even as it is well appreciated by the public and needed for planning resource management and conservation? The actual policies of the federal (and provincial) government(s) might lead to a narrowing of the research base in Canada, a situation all should be aware of and cautious about.

What might be the role ascribed to the CBA/ABC in such a situation? Confronted to political will, individual scientists might find themselves powerless. Only by regrouping and by channelling efforts will we be able to influence the government. It always was a goal of the CBA/ABC to further the cause of botany in Canada. How will we manage to do so? Our involvement with the Biological Council of Canada now takes on all its meaning, as it affords us to do a very effective lobby in Ottawa with the help of sister societies in the biological sciences, as well as other associations across Canada. A more active participation of active botanists in government committees, by improving our image and credibility, is another way of achieving this objective. Raising public awareness, as was asked for last year, is also crucial. Internally, CBA/ABC is creating a Science Policy Committee to help define our position on topics such as were discussed above. The Association is pushing for an expansion of the Biological Survey of Canada, which might alleviate some of the problems raised by the cuts, insofar as money will be put into it. Finally, it might be worth to remind the membership that our Annual Meeting are not only social occasions and a trial ground for younger colleagues, it must also become a forum where policies are set and actions taken.

All these factors taken together militate in favor of a stronger CBA/ABC, and provide arguments for encouraging other botanists to join us in our efforts to make botany stronger in Canada.

Luc Brouillet

OFFICERS OF CBA/ABC 1986-1987

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NEWS FROM THE SECTIONS

Ecology Section
Chairman: Bruce A. Roberts, Can. Forestry Serv., P.O. Box 6028, St. John's, Nfld A1C 5X8

General Section
Chairman: D. R. Lee, Dept. Biology, Memorial Univ., St. Johns, Newfoundland, A1B 3X9

Mycology Section
Chairman: J. E. Traquair, Harrow Res. Station, Harrow, Ont. N0R 1G0

Phycology Section
Chairman: Lewis M. Brown, Dept. Plant Scis, Univ. Western Ontario. London, Ontario N6A 5B7

Structure & Development Section
Chairman: N. G. Dengler, Dept. Botany, Univ. Toronto, Toronto, Ont. M5S 1A1

The Structure and Development Scetion is in the process of preparing a Directory of Botanists working in this field in Canadian institutions. A form soliciting information has been sent out to the members. If you have not received the form, a copy of the form can be obtained from Vipen Sawhney, Department of Biology, University of Saskatchewan, Saskatoon, Sask. S7N 0W0. If you have received the form, please fill it and return it to Vipen as soon as possible. Should you know of any botanist who is working in this field in Canada and is not a member of CBA/ABC, please forward a copy of this form to him/her and request that it be returned to Vipen. Please note that the Directory is scheduled to be published in the April 1987 issue of the Bulletin. However, all the information must be received by the end of January 1987 so that the deadline for publication can be met. Your cooperation in this matter will be greatly appreciated.

Systematics & Phytogeography Section
Chairman: Paul Catling, Agricult. Canada, Biosystematics Research Centre, Ottawa K1A 0C6

RESULTS OF THE 1986 ANNUAL MEETING, LAURENTIAN UNIVERSITY, 23 JUNE 1986.

1. NEW EXECUTIVE for 1986-87 is:

Chairman - Paul Catling (BRC, Ottawa)
Secretary - K. Pryer (Nat. Museum)
Members - J. Bain (Macdonald College, Ste Anne de Bellevue)
C.C. Chinnappa (U. Calgary)
Eric Haber (Nat. Museum)
Julie Hrapko (Edmonton)

2. RATIFICATION FOR CHANGE IN BY-LAWS

Proposed changes to by-laws (affecting elections) indicated below were unanimously approved and are effective. Ratification is hereby sought from section members.

ITEM 10 Chairman. Secretary and ordinary members of the Executive Committee shall be elected for the period of one general meeting to the next but shall be eligible for re-election.

Change to:-- .. for a period of two years and shall be eligible for re-election. Chairman and Secretary should be elected in alternate years.

Motion to consider amending constitution as above was made at the 1984 meeting of S & P held on June 25. 1984. at UNB.

Rationale: - it has become unofficial policy for committee members to serve two years and thus there has been confusion as to when elections should be held. There have also been difficulties in adhering to the constitutional provisions for calling for moninations and conducting elections.

The election of Chairman and Secretary in alternate years means that there would be an election every year but would ensure continuity on the Executive Committee.

ITEMS 11 - 14 -- Election of Executive Committee and means of Election

Item 11 - Change to: -- The Chairman. Secretary and ordinary members shall be elected by vote of the membership in attendance at the general meeting.

Item 12 - Change to: -- The Executive Committee shall each year appoint a Nominating Committee of no fewer than three members. including preferably the current Secretary and the past Chairman.

Item 13 - Change to: -- The Nominations Committee shall put forward a nucleus of essential nominations including at least one nominee for Chairman. one for Secretary and three for ordinary members. In preparing the list the Nominations Committee shall bear in mind some continuity of membership of the Committee. The list of nominees shall be presented to the general meeting of the Section when further nominations shall be solicited. Voting for the nominees shall take place at the general meeting. Nominees shall be present at the general meeting at which they stand for election.

Item 14 - Delete

Rationale: -- No other section elects its officers by mail nomination and ballot, and it would seem that we should follow the pattern of elections used by other sections. The present procedure has become cumbersome. time consuming and expensive to run with two mail-outs (nomination and ballot forms) per election. This can cost CBA/ABC $150-200 per year just to run elections for the officers -- an expense that does not seem justified. especially in view of the fact that no other section costs CBA/ABC any money for the general running of its operation. The General Section received money some years ago when they had to run a ballot of members regarding the setting up of a separate Structure & Development Section. but apart from this has not received any money. Other sections may have received advance monies for setting up a special workshop. etc.. at CBA/ABC Annual Meetings but these advances have been returned to CBA later. Note that the General Section ballot was circulated with the Bulletin.

The use of a Nominating Committee to produce a slate of candidates for presentation to the Annual Meeting will ensure that there are candidates for election.

3. NATIONAL MUSEUM REPOSITORY FOR UNPUBLISHED CHECKLISTS

New entries were reviewed by Catling. Erich Haber will continue with the maintenance of the repository. CBA members are asked to contribute unpublished (or published) lists on a continuing basis. Send them to Dr. Erich Haber, Botany Division, National Museum Of Natural Sciences. National Museums of Canada, Ottawa, Ontario K1A 0M8.

4. FLORISTIC BIBLIOGRAPHIES

Following the suggestion (at the 1984 annual meeting) for the production of regional floristic bibliographies, one has been produced for New Brunswick, Newfoundland (insular) and Nova Scotia. Another for Manitoba is in the advanced stages of preparation. The "maritimes"

bibliography is available (no charge) from:

Dr. Paul Catling
Biosystematics Res. Centre
Research Branch, Agric. Canada
Wm. Saunders Bldg.
Central Experimental Farm
Ottawa, Ontario K1A 0C6

Julie Hrapko indicated that she has almost finished a list for Alberta. Thus there are lists available now (or nearly available) for most provinces (excepting Quebec, Newfoundland - Labrador and Prince Edward Island). The floristic work on Prince Edward Island is reviewed in the recent (1985) reprint of Erskine's (1960) flora with an introductory update.

5. SYSTEMATICS AND PHYTOGEOGRAPHY SYMPOSIA IN MONTREAL

There was unanimous approval for the idea of the S & P section organizing symposia for the upcoming annual meetings. Paul Catling will investigate the possibility of symposia in Montreal.

6. ACKNOWLEDGEMENTS

Keith Denford was thanked for his unusually long three year term as chairman. Thanks were also expressed to Sylvia Taylor for stepping in as secretary last year for her work on the by-laws including rationale for changes. Erich Haber kindly recorded the minutes of the meeting.

CBA/ABC REPRESENTATIVES TO BCC

Executive	Member: L. Brouillet
Council	K. Denford
	I. Brodo

CALL FOR RESOLUTIONS OF POLICY TO BE PRESENTED TO THE ANNUAL MEETING

Resolutions for presentation to the Annual Meeting of CBA/ABC to be held in Montreal, Que., in June 1987 MUST BE DELIVERED TO THE SECRETARY OF THE ASSOCIATION NO LATER THAN FRIDAY, MAY 1, 1987.

Members are referred to the Association's By-laws 68-77 for details of the nature and preparation of such resolutions.

All resolutions for presentation:

a) should declare the policy of the Association on matter(s) that shall be forwarded outside the Association.
b) should be carefully worded.
c) require a mover and 4 seconders, all of whom must be members in good standing,
d) must be accompanied by a supporting brief.
e) must be accepted by the Board of Directors before presentation to the Annual Meeting.
f) must be presented in person by one of its sponsors.
g) require the approval of two-thirds of the members present and voting at the Annual Meeting.

Send resolutions and accompanying material to: Dr. A. Gordon Thomas, Secretary, CBA/ABC, Regina Research Station, Agriculture Canada, Box 440, Regina, Sask., S4P 3A2.

A. Gordon Thomas

LIONEL CINQ-MARS AWARD

The following regulations will apply to the judging for the Award:

1. The Lionel Cinq-Mars Award shall be given for the best student paper presented at the Annual Meeting of the CBA/ABC.

2. Any boda fide student enrolled at any Canadian institution of higher learning is eligible.

3. Guidelines to competitors:
   a) The paper will be presented orally during the appropriate session as determined by the program committee.
   b) Adjudication will be on the basis of: Content, 60% (originality, technical expertise, and associated subject knowledge), and Presentation, 40% (lucidity and logical flow, value of visual aids if appropriate, audibility and `presence').

The Lionel Cinq-Mars Award is presented at the Annual Meeting Banquet of the CBA/ABC based on a decision made by a judging panel chaired by the President-Elect. The award is $200 and the winner will also become an honorary member of the Association for the next year. The panel is composed of one member from each of the Sections of the Association, anf one member must be francophone.

A student member wishing to compete and be considered for the Award must so indicate on the Abstract Form when submitting it to the organising committee for inclusion in the program of contributed papers. Failure to indicate the decision to enter the competition by checking the appropriate box on the Abstract Form, even though unintentional, cannot be corrected later

Dr. K.E. Denford,
Judging Panel

CBA ANNUAL MEETING 1987
UNIVERSITÉ DE MONTREAL - MONTREAL
JUNE 14 - 18

All botanists are cordially invited to the Universite de Montreal for the 23rd Annual Meeting of the Canadian Botanical Association. This year, the members of the Societe botanique du Quebec are also invited to join us. The theme of the meeting, and that of the general symposium, is the diversity of plant forms, as perceived by the various disciplines of botany.

The Universite de Montreal is located in the heart of the City, on the north flank of the Mont-Royal. Montreal can be reached by all available means of transportation and the road system of southern Quebec converges on the City. More precise information on how to get to the University by these various means and ways will be given later during registration.

SCHEDULE

Sunday June 14

8h - 18h Pre-conference field trips (see below)

PM Arrival and registration
Outgoing Executive meeting
Evening Informal reception

Monday June 15

AM Registration

Opening ceremonies

GENERAL SYMPOSIUM: "The diversity of form in vascular plants" (see below)

LUNCH Sectional meetings: Phycology, Ecology

PM Contributed papers

Structure & Development Section: special session (see below)

Sectional meetings: Structure & Development
Conservation Committee

Tuesday June 16

AM Contributed papers/posters
Systematics & Phytogeography Section Symposium: "Systematics and ecology of genus Carex" (see below)

LUNCH Sectional meeting: General

PM Half-day field trips (see below)

EVENING WERESUB MEMORIAL LECTURE, Dr. Ralph Estey (emeritus professor, McGill U.)

Réunion annuelle de l'ABC 1987
Université de Montréal - Montréal
14 - 18 JUIN

Tous les botanistes sont cordialement invités à l'Université de Montréal, pour la 23ième Réunion annuelle de l'Association botanique du Canada. Cette année, les membres de la Société botanique du Québec sont également invités à se joindre à nous. Le thème de la réunion, et celui du colloque général est la réunion, et celui du colloque général est la diversité des formes végétales, telle que percu par certaines des disciplines que regroupe la botanique.

L'Université de Montréal se situe au coeur de la Ville, sur le flanc nord du Mont-Royal. On peut atteindre Montréal par tous les moyens de transport disponibles et le réseau routier du sud du Québec y converge. Des informations précises sur la façon de parvenir à l'Université par ces divers moyens et voies vous seront transmises lors de l'inscription.

Dimanche 14 juin

8h - 18h excursions pré-conférence (voir ci-dessous)

PM arrivé et inscription

réunion du conseil d'administration sortant

Soirée: réception d'accueil

Lundi 15 juin

AM inscription

cérémonies d'ouverture

COLLOQUE GENERAL: "La diversité des formes chez les plantes vasculaires" (voir ci-dessous)

MIDI réunion de sections: Phycologie, Ecologie

PM communications

Sections Structure & Développement: session spéciale (voir ci-dessous)

réunions de sections: Structure et Développement
Comité de la conservation

Mardi 16 juin

AM communications et affiches

Section Systématique et Phytogéographie: "Systématique et écologie du genre Carex" (voir ci-dessous)

MIDI réunions de sections: Générale

Wednesday June 17

AM Contributed papers/posters

Mycology Section: Keynote address and papers on the theme of mycorrhizae (see below)

LUNCH: Sectional meetings: Systematics & Phytogeography

PM Contributed papers/posters

Annual General meeting

Oncoming Executive meeting

EVENING CBA Banquet

Presentation of Awards

Entertainment

Thursday June 18

(If necessary: Communications)

Departures

Information on symposia and special sessions

1. GENERAL SYMPOSIUM: "The diversity of form in the vascular plants" (Organizer: Denis Barabe)

The objective of this symposium is to discuss the various approaches used to explain the diversity of plant forms. Ontogenity, paleobotany, genetics and ecology are included. Emphasis will be put on the laws and mathematical models developed to explain the variability of forms. This symposium will attempt to answer the following question: Is a unitary theory on the diversity of plant forms possible?

Introduction and chairperson: Dr. J. Vieth (Universite de Montreal)

Invited speakers:

Dr. Spencer Barret (U. of Toronto): genetics

Dr. Gerard Cusset (U. Paris VII): ontogeny

Dr. K. J. Niklas (Cornell U.): paleobotany

Dr. James White (Dublin College): ecology

Synthesis: Dr. Taylor Steeves(U. Sask.)

2. Special session, Structure & Development section: (Organizer: A. Macdonald)

Presentation of papers directly related

PM excursions d'une demi-journée (voir ci-dessous)

SOIREE: CONFERENCE COMMEMORATIVE WERESUB par le Dr Ralph Estey (phytopathologiste, professeur emerite du Collège Macdonald de McGill U.)

Mercredi 17 juin

AM Communications et affiches

Sections Mycologie: conférence spéciale et communications sur le thème des mycorrhizes (voir ci-dessous)

MIDI réunions de sections: Systématique & Phytogéographie

PM Communications et affiches

Assemblée générale annuelle

Réunion du nouveau conseil d'administration

SOIREE Banquet de l'ABC

Remise des prix

Divertissement

Jeudi 18 juin

Si nécessaire: communications

Départs

Information sur les colloques et sessions spéciales

1. Colloque général "La diversité des formes chez les plantes vasculaires".

(Organisateur: Denis Barabé)

L'objectif de ce colloque est de faire le point sur les différentes approches utilisées pour expliquer la diversité des formes végétales. Ceci comprend l'ontogénèse, la paléobotanique, la génétique et écologie L'accent sera mis sur les lois et les modèles mathématiques développés pour expliquer la variabilité des formes. Ce symposium tentera de répondre à la question suivante: une théorie unitaire de la diversité des formes végétales est-elle possible?

(Président de session et Introduction: Dr. J. Vieth (U. de Montréal)

Conférenciers invités:

Dr. Spencer Barret (U. Toronto), génétique

Dr. Gerard Cusset (U. Paris VII, France) - ontogénèse

to the theme of the meeting: "The diversity of form in the vascular plants" (see general symposium)

3. Symposium, Systematics & Phytogeography section: (Organizers: P. Catling, A. Reznicek, W. Crins)

"Systematics and ecology of genus Carex", 6 invited speakers will present review papers on evolution, phylogeny, hybridization and cytology, etc., of genus Carex.

Contributed papers on this genus will be grouped in a special session, following this symposium (Wednesday AM).

4. Special session, Mycology section (Organizer: S. M. Berch)

Keynote address on the development of mycorrhyzae: Dr. L. Peterson (U. Guelph)

Contributed papers on the theme of mycorrhizae will be grouped after this address.

NOTE: Ecology Section Program incomplete.

Information on field-trips

(Organizer: Gilles Vincent)

Pre-conference field-trips (1 day; June 14; approximate cost, lunch included: $25.00)

1. Mont Orford Provincial Park

Located about 90 Km east of Montreal and 853 m high, Mont Orford belongs to the Appalachian Hills. Floristic changes associated to the altitudinal gradient allow visitors to observe, in a single day, the Laurentian maple forest, a yellow birch-maple forest, a yellow birch forest and last, a fir forest. At the summit, amongst a rather sparse vegetation due to winds and thin soils, we will have lunch with a remarkable view of the Eastern Townships of Quebec.

2. Pin-Rigide et Marcel-Raymond Ecological Reserves

The Pin-Rigide Ecological Reserve, one of the first to have been instituted, protects the only significant population of Pitch Pine (Pinus rigida) in Quebec. During the same day, we will also visit the newly established Marcel-Raymond Ecological Reserve, which preserves a Swamp White Oak forest (Quercus bicolor) at the mouth of Riviere du Sud. Finally, we will make a quick stop at the spectacular Rapides-de-Lachine, a site exceptional for its historical and aesthetic interest as well as for its great biological diversity.

Dr. Karl J. Niklas (Cornell U.), paléobotanique

Dr. James White (Collège de Dublin, Irlande) - écologie

Synthèse: Dr. Taylor Steeves (U. Sask.)

2. Session spéciale, section Structure & Développement: (Organisateur: A. Macdonald)

Présentation de communication portant sur le thème du congrès: "La diversité des formes chez les plantes vasculaires" (voir colloque général).

3. Colloque, Section Systématique & Phytogéographie: (Organisateurs: P. Catling, T. Reznicek, W. Crins)

"Systématique et écologie du genre Carex"

6 conférenciers invités présentent des communications résumant les connaissances sur l'évolution, la phylogénie, l'hybridation et la cytologie, etc., du genre Carex.

Les communications portant sur ce genre seront regroupées, à la suite de ce colloque (mercredi AM)

4. Session spéciale, Section Mycologie: (Organisateur: S. M. Berch)

Conférencier invité sur le développement des mycorrhizes: Dr. L. Peterson (U. de Guelph).

Communications regroupées sur le thème des mycorrhizes.

Note: Le programme de la Section Ecologie est incomplet.

Information sur les excursions
(Responsable: G. Vincent)

Excursions pré-conférence (1 journée)
(Coût approximatif, lunch inclus:$25)

1. Parc provincial du Mont Orford

Situé à environ 90 Km de Montréal et d'une altitude de 853 m, le mont Orford appartient aux Appalaches. Les changements floristiques associés a son gradient altitudinal permettront aux visiteur d'observer, en une seule journée, une érablière laurentienne, une éreablière à bouleau jaune, une bétulaie de bouleau jaune puis finalement, une sapinière. Au sommet, dans une végétation assez ouverte à cause des vents et du sol mince, nous dînerons en ayant une remarquable vue sur les Cantons de l'est.

2. Les réserves écologiques du Pin-Rigide et Marcel-Raymond

La réserve écologique du Pin-Rigide

Half-day field trips (June 16)

3. Montreal urban forests: Saraguay and Cap St-Jacques (approx. cost $10.00)

This half-day is devoted to the visit of two regional parks of the Montreal Urban Community. The Saraguay forest represents certainly one of the most important natural woodlots in the Montreal area. The richness of this maple-hickory forest makes it one of the most beautiful forests of southwestern Quebec. During the same trip, we will also visit Cap St-Jacques, characterized by sugar maple bush and silver maple forest.

4. Jardin botanique de Montreal and Institut botanique (U. de Montreal)

The Jardin botanique de Montreal, with a surface of 73 ha, has one of the largest living collections of vascular plants: about 20,000 species and varieties represent the world's flora. For this visit, guides will be available and it will be possible to see the service greenhouses, laboratories and various installations not usually accessible to the public.

Family program

Because of the size of the City, of the diversity of sites to be visited, and of the ease of movement (bus, metro, etc.), no special family program is being prepared. However, we will send you, in February, all the tourist information that is available.

Registration, accomodation, meals, etc.

Meeting, field-trip and banquet registration forms, as well as information regarding lodging (university residences, hotels, etc.) will be mailed to members in February 1987. The Meeting organizers will not be responsible for room reservation. This will be handled directly by residence authorities (mostly single rooms; approx. prices: $15.00 student/$25.00 regular) or the concerned hotels. In the latter case, we suggest that you reserve rapidly. Numerous good restaurants are scattered throughout Montreal.

The registration fee will be around $50.00 ($45.00 students, $55.00 reg.). It will not include banquet ticket, meals or field-trips.

une des premières à être constituée, protège le seul peuplement d'importance de pin rigide (Pinus rigida) au Québec. Au cours de la même excursion nous visiterons la réserve écologique Marcel-Raymond qui protège une chenaie bleu (Quercus bicolor) à l'embouchure de la rivière du Sud. Finalement, nous nous arreterons aux Rapides-de-Lachine, site exceptionel tant par son intérêt historique, et esthétique que par sa grande diversité biologique.

Excursions d'une demi-journée

3. Boisés urbains de Montréal: SARAGUAY et CAP ST-JACQUES
(Coût approximatif: 10.00$)

Cette demi-journée sera consacrée à la visite de deux parcs régionaux de la Communauté Urbaine de Montréal. La forêt de Saraguay constitue sans contredit un des boisés naturels les plus importants de la région montréalaise. La richesse de l'érablière à caryer que l'on trouve à Saraguay en font peut être une des plus belles forêts du sud-ouest du Québec. Lors de la même excursion, caractérise par ses érablières à sucre et argentée.

4. Le Jardin Botanique de Montréal et l'Institut Botanique de Montréal

D'une superficie de 73 hectares, le Jardin botanique de Montréal possède l'une des plus riches collections de plantes vivantes: environ 20,000 espèces et variétès y représentent la flore du globe. Pour cette visite des guides seront disponibles et il sera alors possible de visiter les serres de service, laboratoires et différentes installations généralement non accessibles pour les visiteurs.

Programme familial

A cause de la taille de la Ville de Montréal, de la diversité des endroits à visiter et de la facilité à se déplacer (autobus, métro,etc.), aucun programme familial spécial n'a été prévu. Néanmoins, nous vous ferons parvenir vers février, toute l'information touristique dont nous disposons.

Inscription, logement, repas, etc.

Les formulaires d'inscription pour le congrès, les excursions et le banquet ainsi que les informations concernant le logement (résidences de l'Université, hôtels, etc.), vous seront envoyés en février 1987. Les organisateurs du congrès ne seront pas responsables de la réservation des chambres. Celle-ci se fera directement auprès des autorités des résidences universitaires (surtout chambres simples); prix approximatif: 15.00$ étudiants/25.00$ régulier) ou des hôtels concernés. Dans ce dernier cas, il sera préférable de reserver tôt. De très nombreux et bons restaurants existent partout à Montréal. Les frais d'inscription seront d'environ 50.00$ (45.00$ étudiants/55.00$ réguliers). Ils ne comprennent pas le billet du banquet, ni les repas ou les excursions.

CALL FOR PAPERS

This announcement constitutes the first call for papers for the Annual Meeting 1987. Members are urged to submit abstracts for oral presentations or posters using the abstract form provided. Contributed papers are allowed a total of 15 minutes (presentation and discussion). Additional copies of the abstract form will be mailed on request.

Papers and posters on themes related to the special sessionsand symposia will be particularly appreciated (see above).

With regards to the size of the posters, information will be transmitted in February 1987 along with registration forms.

STUDENTS WISHING TO PARTICIPATE IN THE LIONEL CINQ-MARS AWARD COMPETITION MUST INDICATE THIS ON THE ABSTRACT FORM. THEY MUST PRESENT THEMSELVES THE ORAL PAPER.

DEADLINE DATE FOR SUBMISSION OF ABSTRACTS: FRIDAY, MARCH 13, 1987.

COMMUNICATIONS

Cet avis constitue la première invitation à soumettre des communications pour le congrès annuel de 1987. Les membres sont encouragés à utiliser les formulaires fournis pour leurs résumés de communications orales ou d'affiches. On alloue une durée de 15 minutes pour chaque communication (présentation et discussion). Des formulaires supplémentaires peuvent être envoyés sur demande.

Les communications et affiches portant sur les mêmes sujets que les sessions spéciales et les colloques seront particulièrement appréciés (voir ci-haut).

En ce qui concerne la dimension des panneaux pour les affiches, cette information sera transmise en février 1987 avec les formulaires d'inscription.

LES ETUDIANTS QUI DESIRENT CONCOURIR POUR LE PRIX LIONEL-CINQ-MARS DOIVENT LE MENTIONNER SUR LE FORMULAIRE DU RESUME. ILS DOIVENT EUX-MÊMES PRESENTER LA COMMUNICATION ORALE.

DATE LIMITE DE SOUMISSION DES RESUMES: VENDREDI, 13 MARS 1987.

TWO NATIONALLY SIGNIFICANT BOTANICAL SITES IN NOVA SCOTIA NOW PROTECTED

Members of CBA will be pleased to learn that through the efforts of CBA, the two most important sites for Atlantic coastal plants in eastern Canada have been protected. Both sites occur in the Tusket River Valley, Nova Scotia, where I have nad ongoing research for the past five years (e.g. Keddy 1984a, b, 1985). The shorelines of lakes in the Tusket River support vegetation types and plant species round nowhere else in Canada. Significant species include Coreopsis rosea (endangered in Canada), Hydrocotyle umbellata (endangered in Canada), Sabatia kennedyana (threatened in Canada) and many species considered rare in Nova Scotia (Maher et al., 1978) such as Woodwardia areolata and Panicum longifolium.

These habitats are also important for basic research. The combination of infertile substrates and fluctuating water levels produces a wetland vegetation type unlike any other. These shores provide a reference point where ecological processes can be compared with those of more fertile wetlands such as cattail marshes. The extremely high species richness on these shorelines also provides possibilities for studies of coexistence in plant communities. Irene Wisheu is exploring aspects of these problems in her ongoing research at the University of Ottawa. Some CBA members will have seen her poster at Sudbury last June.

Two significant examples of this vegetation and concentrations of rare species were identified during my early field work in the Tusket River Valley. The one designated top priority occurred on Wilsons Lake. When I visited the landowners of the most significant sections of the shoreline, I found they were most pleased to be owners of such important habitat and that they were willing to sell their land for conservation purposes. A proposal submitted to Wildlife Habitat Canada raised half of the purchase price. At this point the Nature Conservancy agreed to raise the remaining funds and handle negotiations with landowners. The purchase is now complete, and the site will be passed on to the Nova Scotia museum to be designated the province's first ecological reserve.

The second area was a complex of different shoreline types on two lakes joined by a small creek. The main landowner was Bowater Mersey Paper Company, with surrounding areas of crown land. A letter from the President of CBA (Gerry Mulligan) to the President of Bowater (Robert Weary) led to a very positive initial response. A major concern of CBA was damage by all-terrain vehicles to a maedow supporting one of Canada's largest populations of Sabatia kennedyana. This agreement in principle to protect these plants was followed by several years of correspondence involving me as the CBA representative. Last year, Bob Ogilvie, Curator of Special Places at the Nova Scotia Museum became actively involved. Another complicated series of events resulted in the Nature Conservancy of Canada leasing the property at $1.00 per year for the next ten years. (As an added bonus

Bowater invited the Nature Conservancy to explore their land for other significant natural areas!) At the same time, the Nova Scotia Museum has arranged for protection of adjoining crown land by the Nova Scotia Department of Lands and Forests.

Although many details remain to be worked out, it is apparent that these very important sites are now recognized by provincial authorities and that their protection will be coordinated by the Nova Scotia Museum (Katz 1986). In addition, the museum is using the situation to expand its public education program on the botanical significance of southwestern Nova Scotia. Simultaneously, the World Wildlife Fund has been funding research aimed at mitigating damage from all terrain vehicles.

CBA members may wish to take special note of two aspects of this story. First, a letter from the CBA President initiated a chain of events which led not only to the protection of a nationally significant site on corporate land, but led that corporation to invite the Nature Conservancy to look for additional sites on its property. Second, the entire project began as academic research at a university, supported by NSERC. This in turn led to a cascading series of involvements by organizations including the Canadian Botanical Association, Committee on the Status of Endangered Wildlife in Canada, Halifax Field Naturalists, Nature Conservancy, Nova Scotia Museum, Wildlife Habitat Canada and World Wildlife Fund.

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Paul Keddy
University of Ottawa

BIOLOGICAL COUNCIL OF CANADA MEETING
OCTOBER 23 - 24, 1986.

Luc Brouillet and Ernie Brodo represented CBA/ABC. Several matters of concern to CBA/ABC members were discussed, and notably, federal government officials were invited to discuss the matching fund policy for granting agencies.

President John Nursall mentioned that BCC should become an integral part of the operation of each member Society, suggesting that representatives of BCC meet with the executive of each Society. A few articles of the constitution were changed, and will be submitted to each Society for approval.

De la Noue, responsible for planning of the 1990 Second Congress of Canadian Biology, reported on his organizing committee. Pierre Morisset will represent CBA on this committee. The meeting is scheduled for May 27-30, at Universite Laval, Quebec City.

Brock Fenton, of the Committee to Nominate to Government Agencies, reported that few Societies responded to his call. BCC could complement Society recommendations and, since the Council represents a larger constituency, the combined recommendation may be enough to get an individual nominated. Luc Brouillet is a member of this Committee, and also of the BCC Gold Medal Committee.

Regarding the research and matching funding policy for NSERC, Ms. Janet Halliwell, Director of Research Grants, mentioned that the matching scheme could be achieved for the first two or three years, but the fourth was in doubt. NSERC is responsible for implementing the policy. However, as purchasing power will remain constant, it will be impossible to maintain all programs at their present levels. Equipment and infrastructure might be hardest hit. All NSERC programs have been reviewed and new program priorities will become available in November '86. Support for forestry research will come under NSERC. Mr. Bob Rand (Dept. of Finance) and Mr. Allan Cobb (MOSST) also discussed this policy from the point of view of their respective Departments. he draft policy has undergone modifications based on inputs from the scientific community. The possibility of a shift towards more applied research was addressed. The decline in industrial input into research was noted, raising a worrisome issue. The funding policy will be reviewed in 1988-89.

Activities of the National Consortium, of which BCC is part, and especially lobbying efforts, were discussed by Dr. Clement Gauthier, Chairman of the Consortium and Science Policy Adviser for CFBS. A lobby will be held in February 1987, converting, among others, full funding of the Granting Councils' 5 year plans, established program financing and summer student employment. A BCC Science Policy

Task Force was created under J. McNeill to facilitate input of the Society to the Consortium.

Mr. Dalton Muir discussed the Canadian Council on Ecological Areas and COSEWIC. The purpose of his visit was to interest the BCC in joining forces. Dr. Digby McLaren and Dr. Michael Dence, Royal Society of Canada, described the newly developing International Geosphere-Biosphere Program and the concept of Global Change. The RSC will take a lead in Canada. Gray Merriam agreed to form a Coordinating Committee on Global Change to liaison with RSC and coordinate and stimulate BCC and member Society activities. Interested scientists are urged to communicate with Dr. Dence or their Society to become involved in this program.

John McNeill is now presidentof BCC.

Luc Brouillet

THE YOUTH SCIENCE FOUNDATION AND YOU!

Think back and try to remember how you became interested in Science and how you decided on a career in the field of science. I remember it was my interest in gardening that started me on the way to a degree in Agriculture. My father played an important role in fostering my interest in growing things and I'd be willing to bet that for most of us in science-related fields, another individual had a positive impact on our decision.

It's that personal contact and encouragement we try to provide through the programs of the Youth Science Foundation. Our mission is very simple -- to develop an appreciation and understanding of science in every young Canadian. There's no way we can fulfill that mission without the help of a lot of people. Our success, especially in Science Fairs, relates directly to the enthusiasm and commitment of many thousands of volunteers across the country.

As a scientist, or someone who works in a science-related field, you can have a major impact on the educational and career choices of young people, our future scientific leadership. But first you have to get involved with young people in a personal way, and the Youth Science Foundation provides you with that opportunity.

When we ask our science fair participants what they enjoy most about their experience, two things stand out: the chance to share ideas with other young people interested in science and the opportunity to talk to interested experts about their projects. Scientists who act as science fair judges similarly comment on what a great experience it is to meet these keen young people, alight with enthusiasm and idealism and full of creative ideas.

If you need to be convinced of the value of working with our future scientific leaders, try the experience of judging a science fair, or advising a science club, or leading special outings and classes. You can't help but be moved and excited by such experiences.

The Youth Science Foundation concentrates on activities that provides hands-on experiences in science and introduce young people to the scientific and technological world beyond the curriculum. As well, we produce two magazines; FLABBERGAST for children aged 7 to 14 years, and Youth Science News for teens, as well as many resources for teachers and youth group leaders. Our most recent publications have been well received -- Science Is ... -- with 400 pages of science activities for the outdoors, and "Science Safari", individual science projects on observation and data collection, research and problem solving.

I'd like to put the challenge to you to get involved, personally if possible, through one of our 79 regional science fair committees, or even your nearest school. In addition, why not consider joining the Youth Science Foundation as a member, knowing your financial support will help a lot of other volunteers reach out to young people, whatever their economic situation, intellectual capacity or geographical location.

The Youth Science Foundation has been around for over 20 years and a lot of young people have moved through our science fair program. If you were one of those past science fair participants, write us and let us know what you're up to. Your story will help us convince others of the need for our work. For more information, please contact the Youth Science Foundation at; 151 Slater Street, Suite 904, Ottawa, Ontario, K1P 5H3, telephone (613) 238-1671.

David Hall
Executive Director
Youth Science Foundation

XVIth INTERNATIONAL CONGRESS OF GENETICS

The XVIth International Congress of Genetics will be held at the Metropolitan Toronto Convention Centre, August 20-27, 1988. The Congress is sponsored by the International Genetics Federation, the Genetics Society of Canada, the National Research Council, the Royal Society of Canada and the Biological Council of Canada. The theme of the Congress will be "Genetics and the Unity of Biology". The program will consist of approximately 45 invited symposia emphasizing the most recent and exciting developments in genetics and allied sciences. In addition, there will be poster presentations, workshops, specialized pre- and post-Congress meetings, a large commercial exhibition and an interesting and varied social program. It is the aim of the

Organizing Committee to make the Congress Program as ecumenical as possible. Thus, it should be of interest to a broad range of scientists whose primary interest may not be in genetics itself.

The program will be subdivided into four main areas as follows:

I. Genes and Chromosomes
II. Genomes and Organisms
III. Populations and Evolution
IV. Genetics and Society

If you are interested in attending the Congress, and wish to have your name in the mailing list for Congress announcements, please write

Mr. Laurier Forget,
Office of Conference Services,
National Res. Council of Canada,
Ottawa, Ontario, K1A 0R6

ANNUAL MEETING OF THE MICROSCOPICAL SOCIETY OF CANADA, WITH SYMPOSIUM ON IMAGE PROCESSING AND ROBOTICS FOR MICROSCOPY, June 16-19, 1987, Winnipeg, Manitoba. For information contact: Larry van Caeseele or Richard Gordon, Botany Department, University of Manitoba, Winnipeg R3T 2N2 (204-474-8299 or -8763). Abstract deadline: April 1, 1987.

MISSOURI BOTANICAL GARDEN - NEW DIRECTOR OF RESEARCH

Dr. Peter H. Raven, director of the Missouri Botanical (Shaw's) Garden announces that Professor Enrique Forero, currently of the Institute of Natural Sciences, National University of Colombia, Bogota, Colombia, has been named Director of Research at the Garden, effective October 1, 1986.

As Director of Research, Professor Forero has supervisory responsability for the Garden's research staff and program, and for its collections of dried plants (herbarium specimens), now numbering some 3.5 million. He will continue his own personal program of active research and exploration, and pursue his teaching activities in St. Louis. Dr. Marshall R. Crosby, who has served as Director of Research since 1977, retains a portion of his responsabilities as Director of Botanical Information Resources, supervising the Garden's publications, computer service in relation to research, library, and research on mosses, his specialty.

MEMBERSHIP RENEWAL

Membership renewal forms were sent out in November 1986. If you have not already renewed your membership, please do so NOW. The membership list is corrected at the end of February and all those who have not renewed are deleted from the computer.

PROGRAM ESTABLISHED FOR THE CONSERVATION OF CANADA'S RARE PLANT RESOURCES

Canada has an estimated 1,200 species of native plants that are rare or endangered. Botanical gardens and arboreta have an enormous potential to contribute towards the lessening of the threat under which these species precariously exist.

At the founding meeting of the Canadian Plant Conservation Program, hosted by the University of Guelph Arboretum, representatives from Canada's botanical gardens, related institutions, and various agencies concerned with the conservation of plant gene resources, convened to consider appropriate objectives and action.

This national program has a special emphasis on the roles living collections can play in a comprehensive conservation effort. With a goal of conserving genetic diversity of species and populations of rare native plants, as well as heritage ornamentals, detailed objectives were defined.

The enhancement of communication and cooperation between institutions with living collections is a primary objective. In addition, such institutions are encouraged to carry out research into the conservation biology of rare plants, which will provide the information needed for the management of significant natural habitats. Garden-propagated collections of rare plants can serve in a crucial aspect of conservation, namely, the promotion of public awareness of conservation issues and philosophies through interpretive programs.

A paramount concern of conservation is the protection of habitats of rare species. This group intends to maintain communications with agencies directly concerned with habitat conservation, and direct efforts toward that overall goal. The establishment of garden collections of rare plants is seen as a complement to, not a substitute for, habitat conservation. These collections, sampled from wild populations in such a manner as not to further endanger them, provide material for research as well as a source of appropriate genotypes for re-introductions into restored habitats or enhancement of depleted populations.

A parallel program will be established for the preservation of heritage garden plants, both those that have been in cultivation since the time of settlement and old cultivars developed in Canada. In addition to preserving some of our cultural heritage, many have potential for

further garden selections suitable to Canada's climatic conditions.

The botanical garden community has recognized the important role it can play in the World Conservation Strategy, to which Canada is a party. This program will facilitate and coordinate efforts at our various botanical gardens, arboreta, and related institutions.

The initial groundwork for this program was done by Patrick Seymour and staff of the Devonian Botanic Garden (Edmonton). The members of the elected executive are: John Ambrose (chairman, University of Guelph Arboretum), Randy Currah (Devonian Botanic Garden) and Peter Rice (Royal Botanical Gardens, Hamilton); and committee chairmen Bernard Jackson (Memorial University Botanical Garden, St, John's) and Ann Smreciu (Devonian Botanic Garden).

John Ambrose

PERSONALIA

DISTINGUISHED MYCOLOGIST

Dr. Mildred K. Nobles, now retired from the Biosystematics Research Centre, was in August 1986 named Distinguished Mycologist by the Mycological Society of America. The Society's President Dr. Roger Goos of the University of Rhode Island presented Dr. Nobles with an engraved plaque and reviewed the highlights of her research.

Her pioneering studies on the decays of wood in forest trees were an integral part of several major studies by eminent forest pathologists. Her manual for the identification of living cultures of 126 species of wood-decay fungi (Hymenomycetes), published in 1948, is a classic. A revision of this manual, expanded to include 149 species of wood-inhabiting fungi, was published in the Canadian Journal of Botany in 1965. Although much of Dr. Nobles' work was of a technology transfer nature, her principal contributions to science are the revised phylogenetic schemes which she proposed. These schemes were, in part, based on a set of new characters which she developed.

She is one of the most frequently cited mycologists in recent times. Her 1965 paper in the Canadian Journal of Botany has been cited in over 200 publications.

In addition she built an invaluable reference bank of living cultures of wood-decay fungi. This collection of about 3000 cultures was the foundation of the National Collection of Fungus Cultures, established in 1973, and it is continually being used by biotechnologists, geneticists, teachers and plant pathologists.

Dr. Nobles was a research associate at BRC for a number of years but more recently she has been working at home on a major review paper. However a demanding social schedule has tended to impede the progress of science.

Michael Corlett

A CELEBRATION OF GEORGE F. OTTO (1906 - 1986)

The recent death of George F. Otto, a long standing member of the Canadian Botanical Association, has left a conspicuous gap in the Botanical community.

While a young man in Germany, George became fascinated with lichens. His delight in mountaineering gave him ample opportunity to see the diversity of these organisms in Europe. After emigrating to Canada and attaining employment that gave him financial security, he again began to pursue the study of lichens. He was supported in this study by the Botany Department at the University of British Columbia. Soon he accepted the responsability of curating the lichen collections and was awarded the position of honourary curator of the lichen herbarium.

Through his collections made during the summer vacations, he was able to accummulate and determine specimens and initiate a fruitful exchange with foreign lichenologists. These exchange collections as well as his own formed the nucleus of the lichen herbarium at the University. His collections from the Vancouver area are the most comprehensive, but he made extensive collections for diverse areas in the province and encouraged ecology students in particular to contribute collections. Indeed he assisted many of these students in identification of material that was valuable in their community analyses. His continued encouragement of students has made a major impact on the understanding of the systematics and distribution of lichens in western North America.

George was an enthusiastic bibliophile and assembled a very important library of lichenological literature. He has bequeathed this library to the Department of Botany of the University of British Columbia. George was always deeply concerned that monographers of lichens would utilize the collections, and was distressed to note published distribution maps that left British Columbia as a virtual lichen desert, when he had accummulated a partial assemblage of the extraordinary lichen richness available in the province.

George's contribution to the distribution of lichens and the importance of his collection in the ultimate solution of systematics problems cannot be overestimated. His value as a cheerful, good-humored and enthusiastic field and departmental colleague has left a serious gap in the lives of those who were fortunate to interact with him.

W. Schofield

POSITIONS OPEN

QUEEN'S UNIVERSITY - KINGSTON

The Department of Biology invites applications for a tenure-track position in POPULATION/EVOLUTIONARY GENETICS, using applications of Molecular Genetics techniques on natural populations. The successful candidate should be prepared to develop a vigorous research program, teach in the undergraduate and graduate programs, and supervise graduate students. There is the potential to interact with an established biotechnology group. Qualifications include a Ph.D. degree and published evidence of excellent research ability. Candidates of either sex are equally encouraged to apply. The appointment will be effective July 1, 1988 (or as negotiated) and is expected to be at the rank of Assistant Professor with salary commensurate with qualifications. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian Citizens and Permanent Residents. Application deadline is March 1, 1987 or until a suitable candidate is selected. Send applications, which should include a curriculum vitae, statement of future research interests, and names and addresses of three referees to: Dr. D.T. Dennis, Head, Biology Department, Queen's University, Kingston, Ontario, Canada K7L 3N6.

THE UNIVERSITY OF BRITISH COLUMBIA
DEVELOPMENTAL BOTANIST/BIOTECHNOLOGY LABORATORY

Subject to final budgetary approval, the Department of Botany at the University of British Columbia seeks to appoint a Developmental Botanist. The successful candidate will be jointly appointed in the Department of Botany and the Biotechnology Laboratory in a tenure track faculty position at the rank of Assistant Professor. Substantial start-up funding will be provided.

Applicants must have a Ph.D. and should be committed to fundamental research in some aspect of Plant Development and be interested in the application of the techniques of biotechnology for the improvement of agricultural or horticultural species. The individual who is appointed will be expected to develop a vigorous research program which will involve interacting with existing research groups. In addition he/she will participate in the teaching and supervision of undergraduate and graduate students in Botany, Biology, or Genetics.

Salary will be commensurate with qualifications and experience. Closing date is March 1st to begin July 1st, 1987. The University of British Columbia offers equal employment to qualified female and male applicants. In accordance with Canadian Immigration requirements this advertisement is directed to Canadian citizens and permanent residents. Please send a curriculum vitae and arrange for three letters of reference to be sent to:

Dr. A.D.M. Glass, Head
Department of Botany
University of British Columbia
#3529 - 6270 University Blvd.
Vancouver, B.C., Canada
V6T 2B1

BOOK REVIEWS

Fallacies of Creationism by Willard Young, 1985. Detselig Enterprises Ltd., Calgary, Alberta. 302 pp., $ 21.95 Can.

The indifference with which most university staff and students treat the topic of Creationism is symptomatic of a lack pf appreciation of the motives and philosophy of "Scientific Creationists". Willard Young has entered the arena of the Evolution/Creation debate with a book whose purpose is not to convince the reader of the merits of evolutionary theory, but to present to the scientifically aware an evaluation of the stands taken by Creationists.

Young begins by carefully pointing out that Creationism (capital C) is "based upon the assumption that the Bible is literally, historically, and scientifically accurate in all respects." This is not to be confused with creationism (small c), which invokes a Creator but allows for a more liberal interpretation of the Genesis account. While creationism has long been important part of Christian doctrine, most adherents to Christianity are quite prepared to accept that their religion lies outside the framework of science - and vice versa. Young outlines the historical background of creationism and the adoption of such concepts as an old Earth, a dynamic Universe, and Darwinian evolution by much of the Christian community during the 19th Century.

That evolution (change through time) has occurred is now accepted as fact by the scientific community almost without exception. The Theory of Evolution, as Young so rightly points out, is another matter entirely. The theory, first proposed by Darwin in 1859, has been thoroughly altered as new evidence, such as Mendelian genetics, has become available. Maturation and modification of the theory does not alter the fact that evolution has occurred. In response to this growing acceptance of the concept of evolution and the truly staggering volume of evidence, the Creationist movement has arisen and fought tirelessly in order to defend against what it perceives as a threat to the

authority of the Bible and to the very existence of Christianity.

Young has carefully researched the mountain of Creationist literature that has appeared recently and writes with insight both about the organizations that have grown up to combat "atheistic evolutionism" and about the individuals behind them. The Institute for Creation Research and its members are front and centre in most cases. Young leaves no doubt that one of the primary purposes of the Creationist movement is the introduction of :"Scientific Creationism" into the school systems at the expense of "Scientific Evolutionism". The distinction between Scientific Creationism and Scientific Evolutionism (or science in any form) is one of the thrusts of this book.

As a physicist, Willard Young has a thorough understanding of many of the arguments mounted by Creationists, such as the Second Law of Thermodynamics controversy and the problem of the age of the Earth. He helps the reader to understand natural laws and to see through the often bewildering proposals of the Creationists. Other topics, including the Origin of Life and the Origin of Man, are handled by Young with facility and incorporate the latest evidence.

Young has managed to avoid the quagmire of the Evolution/Creation debate by first asumming that the reader has some understanding of the Theory of Evolution and accepts that evolution has occurred. He also carefully avoids taking swipes at Creationism, but thoroughly documents, generally with direct quotes from Creationist literature, the Creationist point of view. Then, painstakingly, he examines the scientific evidence, evaluating the Creationist position and explaining scientific interpretations.

"Fallacies of Creationism" is a thorough, well written book that contains a wealth of information and a lengthy bibliography to help the reader delve further. It has really been written not as a popular account, but more in the style of a scientific text. As such, it is aimed principally at those with at least an introduction to the sciences at the University level. This book is not ease reading and is definitely not for those only casually interested in the topic.

Although American schools are immune from intrusion of religion into the classroom, continued pressure by Creationists threatens the strength of the science curriculum. Young points out that we in Canada do not enjoy such protection against the teaching of religious doctrine in the schools, and that our classrooms are quite vulnerable. Indeed, Young documents instances of Canadian school systems welcoming, or at least turning a blind eye to, the use of Creationist literature in science classes.

In the "Scientific Age" we dare not allow erosion of the quality of instruction in the sciences. However, we must first educate ourselves to the nature of this conflict if we are to deal intelligently with the problem. Willard Young helps us with this necessary first step in our encouter with the "Fallacies of Creationism."

James F. Basinger

Population Biology and Evolution of Clonal Organisms, 1985. J.B.C. Jackson, L.W. Buss, R.E. Cook (eds.). Yale Univ. Press, New Haven. 530 pp. $30.00 US

Most theoretical views of evolution and population dynamics require, as basic units, discrete, genetically homogenous individuals, measurable and countable in time and space. Possession of a single, usually sexual, mode of reproduction and a good correlation of genet age to residual reproductive value are frequent additional constraints. Many taxa do not meet these constraints: they might bud or produce apomictic seeds, parthenogenetic offspring, bulbils, interconnected ramet complexes of greatly variable size, etc. And, as a consequence, comprehension of those organisms capable of asexual reproduction requires considerable conceptual and methodological adjustment. The thirteen essays compiled in this 530 page document address these topics for analogous plant and animal species and do much to illustrate the diversity of opinion and approach. Indeed, according to the editors, one of the major objectives was to facilitate an abrasion of viewpoint.

A 1982 symposium sponsored by the NSF at Yale University provided the basis for this volume, although some two-thirds of the collection has been revised and expanded. At least eight of the essays have a distinct botanical bias. In addition, an overview by J. Harper and an essay on individualism by L. Buss have been provided, as have a useful glossary and generic and general indices. The principal emphasis is upon terrestrial plant species and/or marine invertebrates, and the topics include the paleobiological history of clonaty, the demographic implications of clonal and colonial growth and asexual reproduction, micro- and macro-evolution, intra-colonial integration, distribution, co-existence, disturbance, the evolution of mutualism, and the physiological, morphological and ecological aspects of growth, branching and modularity.

The essays of Harper, Silander and Caswell provide good examples of the range in scope, and are of particular interest to botanists. Harper provides the broad overview and advocates a generalized view of clonality, including virtually any growth form which can be considered modular, iterative and branched. He addresses a variety of topics, amongst which are the degrees of clonal integration and control of

growth, plus the nature of modular growth response to environmental heterogeneity and inter and intra clonal contact. He also very deftly directs the reader to the other essays in the book. The approach of Silander is more narrow and concerned with two aspects of the micro-evolution of clonal plant species. His first concern is to point out the existence of extensive phenotypic variation in apomictic plants. He emphasizes the importance of genotype x environment interaction and frequency-dependent selection on the maintenance of this richness. And, most interestingly, he evaluates the contributions of less conventional means to phenotypic variation - somatic mutation, microbial infection, etc. His second concern is with the genetic and evolutionary costs of maintaining the apomictic/ sexual and seed/vegetative polymorphisms dominant in clonal plants. The problems associated with demographic modelling of species which are indeterminate in growth, potentially immortal, and not limited to a single mode of reproduction are the concern of Caswell. He gives a concise introduction to demographic methods and applies his generalized model to three cases: 1) demography of ramets (modules), each classifiable by age; 2) the demography of plastic ramets classified by size; 3) the demography of genets, with vegetative reproduction here corresponding to genet "growth" rather than ramet "reproduction". As usual, there is the inherent condition of linearity, and he points out the great analytical complexity that would arise if density effects were included. Furthermore, he points out that whilst the models are ready, the data are not. It is onerous, even in principal, to quantify the cost functions relating clonal and sexual reproduction, growth, and survival . A contrast of this approach to the practicability of the more descriptive approaches advocated by such as Rabotnov (1969; cf. Harper 1977) could have been a useful addition.

Overall, the essays are written at a level helpful to those preparing senior undergraduate lectures or as underpinnings for graduate courses. They are of particular interest to researchers wnating inter-disciplinary perspectives. For the most part, the papers are well researched and written, offer good critiques, and contain substantial tables and appendices. Care was taken by the authors to define their terminology, and most present interesting and well argued suggestions for future research.

As the editors confess, however, the contents of the chapters "... spilled over into one another to such degree that subdivision seemed arbritary." They were right. The spill over is substantial, and while it does provide an interesting spectrum of philosophical and stylistic approaches to various topics (eg. what is an individual), it has led to a lot of redundancy, which is the book's greatest weakness. More conservative editing and perhaps narrower topics could have led to a more economical and tightly integrated product. Never the less, I enjoyed this book and consider it an enrichment to the book shelf.

D.H. Broderick

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Handbook of Plant Cell Culture: vols 2 & 3; W.R. Sharp, D.A. Evans, P.V. Ammirato, and Y. Yamada (eds), 1984. MacMillan Publishing Co.

These reviews published in the October issue of the Bulletin was submitted by:

Dr. R.I. Greyson, Dept. Plant Sciences, Univ. Western Ontario.

BEST WISHES IN THE NEW YEAR TO ALL OUR MEMBERS, SUBSCRIBERS AND READERS.

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To ensure prompt delivery of the Bulletin please notify the Secretary of any change of address as soon as possible.

Inquiries about membership of the CBA/ABC should be addressed to the Secretary of the Association: - Dr. A. Gordon Thomas, Regina Research Station, Agriculture Canada, Box 440, Regina, Sask., S4P 3A2, (306) 585-0255.