

**BULLETIN**

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Windsor, June 10-14

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**EDITORS' FORUM:**

There's a great debate raging in the pages of The Plant Science Bulletin (the publication of the Botanical Society of America) about a name change. Dr. Ray Evert of the University of Wisconsin started the ball rolling by asking the question, "what can be done about our problems of declining membership and lack of broad representation in the Journal (American Journal of Botany)". He proposes removing the word Botany from the name of the Society and the Journal. It seems, according to Dr. Evert, that many of the ills that have plagued the plant research community in the past few decades can be traced to the use of the archaic term "Botany". Dr. Evert concludes by saying, "that we (American botanists? plant biologists?) may miss a golden opportunity to seize the initiative..to enter the 21st century with a new image and with renewed vitality." Of course, not everyone in the Botanical Society of America thinks that a name change will solve all of the problems. Dr. Peter Bernhardt of Saint Louis University thought that, "dropping the 'B' word shows contempt for the history of our discipline and would suggest that we have decided to 'give in' to the wave of anti-intellectualism that pervaded American life in the eighties and seems to have colored thought on some campuses". I must admit that this debate has been quite entertaining and it has certainly breathed new life into the once stodgy Plant Science Bulletin. I wonder what members of CBA/ABC are thinking about this great semantic struggle....does anyone out there care about this at all? It seems to me that the Botanical Society of America has demonstrated that it is still quite vital (perhaps more so than most members realize), since it has members who care enough about their future that they're willing to write, debate and work for it. At this point in time I'm not quite as convinced that Canadian botanists really care about where we're going or if they do care are not yet willing to do something about it.



This paper contains recycled fibers

## Call for "Emergency Resolutions"

Members are reminded that, in accordance with By-law 76, "Emergency Resolutions" may be submitted to the Board of Directors at any time prior to their meeting immediately before the Annual Meeting. The Board of Directors will then declare whether they conform to the general guideline for resolutions.

Resolutions submitted under By-law 76 **must** be received by the Secretary 10 days before the Annual Meeting (no later than May 31, 1990). "Emergency Resolutions" can only be admitted if they deal with an emergency situation that leaves no time for the preparation of a normal resolution.

Send "Emergency Resolutions" plus all relevant material to:

Mrs. Sylvia Taylor, Secretary CBA/ABC  
Botanical Garden  
The University of British Columbia  
Vancouver, B. C. V6T 1W5

## Summary of Fall Executive Committee Meeting, Dec. 14, 1989.

### 1. Business Arising from the minutes of the Aug. 10 Executive Meeting.

a. All Directors were reminded that their duties now include being regional reporters for the Bulletin.

b. The members of the Phycological Section will be contacted by the President to ask if they are still interested in CBA/ABC, and whether they still want a Phycological Section.

### 2. Reports of Officers

#### a. President (I. M. Brodo)

i. Methods of sorting out the problems surrounding the Cinq-Mars scheduling were discussed, and concluded with the recommendation that the Convenor of the competition be provided well in advance with the list of student competitors and titles.

ii. CBA/ABC has received an official invitation from BSA to hold a joint meeting with BSA at the AIBS meetings in Ames, Iowa in 1993. The revised schedule of meetings is printed below.

iii. BCC held its final board meeting in October (CBA/ABC representative was Paul Catling). Its main item of business was to dissolve itself

and to recommend affiliation with CFBS. Provided that everything went smoothly, we were to have become affiliated with CFBS in March.

iv. Goals for this year: to build up the membership, and to determine issues to be addressed by the Science Policy Committee of CFBS.

#### b. President-Elect (P. Catling)

i. The production of a revised membership brochure is underway.

#### c. Secretary (S. Taylor)

i. The Policy Manual and Meeting Guidelines are being revised.

ii. Recycled Paper - the request by Erich Haber that we become more environmentally concerned with regard to the use of recycled paper was discussed. The Bulletin already uses paper that is 75% recycled. Larry Peterson will try to use recycled paper for the new membership brochure. Unfortunately, it will be 2 or more years before we order any more letterhead (at which time we will try to obtain recycled paper).

#### d. Treasurer (T. Dickinson)

i. The transition has now taken place and all is working smoothly.

ii. The Youth Science Foundation membership has doubled to \$400, and the minimum award has risen from \$100 to \$250. The Executive approved continuation of membership, but have asked for more CBA/ABC publicity.

iii. The **1990 Canada-Wide Science Fair** will be held at Windsor, May 13-19. Michael Weis will see that a judge and presenter are provided by CBA/ABC, and will attempt to improve our publicity.

### 3. Future Meetings

#### a. Windsor (1990)

- all in order  
- Paul Catling will prepare a circular for distribution to groups that might be interested in the Flora of Ontario Symposium (Tuesday afternoon).

#### b. Edmonton (1991)

- Keith Denford reports all is in order.  
- arrangements are being handled by the U. of Alberta Conference Office, with the Botany Department attending to field trips.

#### c. Truro (1992)

- to be held July 5-9, at the Nova Scotia Agricultural College, followed by the CSPP meeting in St. John's Nfld. (July 12-16).

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d. **Ames, Iowa** (1993)

- the Executive accepted the invitation to meet with the Botanical Society of America at the AIBS meetings.

e. **Calgary** (1994)

- C. C. Chinnappa will chair the meeting.

**4. Other Business**

a. **Systematics and Phytogeography Section Student Award.** Information will be gathered to present to the Executive and the Annual General Meeting in Windsor, re the naming of the award and the exact form it will take.

b. One of the new duties of the Past President will be to chair the **Science Policy Committee**. Thus Larry Peterson becomes the present chair.

**Future CBA/ABC Meetings**

1990-**Windsor** (June 10-14)

1991-**Edmonton** (June 22-26)

1992 - **Truro** (July 5-9)

1993 - **Ames, Iowa** (with AIBS)

1994 - **Calgary**

**New York Natural History Conference  
June 20-22, 1990, New York State  
Museum, Albany, New York**

This conference is a forum for current research, and is being organized by the New York State Biological Survey. It will update scientists on natural history research in New York State, focus attention on critical research needs, and foster communication and linkages among research groups. The program will include invited symposia, contributed papers, and poster sessions. Symposia being organized include: Stream Ecology; Ecology of Lakes; Forest History; Ecosystems and Disruption; Post-Ice-Age Environments; Natural History of Old Fields; Natural History Collections in New York; Biology of Rare Plants and Animals and the Importance of

Natural History Research. For further information contact the Organizing Committee at (518) 474-5812.

- *Bill Crins, N.Y. State Museum, Albany*



**International Organization of Plant  
Biosystematists 1989-1992**

Participants from 23 different countries attended the five day IOPB symposium, July 10 to 14, 1989, organized under the Chairmanship of Soichi Kawano, Kyoto University, and held at the Kyoto Municipal Hall, Kyoto. Highlights of the Symposium included 22 papers by invited speakers; three poster sessions with a total of 102 posters, a full day field trip to Nara and a three day post-symposium excursion to Tateyama. Like the preceding IOPB Symposia, the 1989 Symposium helped to weld friendships and initiate collaboration in research, especially between field and laboratory oriented workers.

The next IOPB symposium will be held in 1992 at the Missouri Botanical Garden, St. Louis, and will be hosted by Dr. Peter Raven.

Membership fees for the period 1990 to 1992 are US \$25 and may be sent to the Secretary-Treasurer, Dr. H. C. M. den Nijs, Hugo de Vries Laboratorium, Biologische Centrum Anna's Hoeve, Universiteit Van Amsterdam, Kruislaan 318, 1098 SM Amsterdam, The Netherlands, Tel: (020) 525-7660; FAX (31 20) 525 7715.

- *Wm. F. Grant, Macdonald College*

**Workshop Invitation**

**The Atlantic Coastal Plain Flora: Toward a North American Conservation Strategy.**

This workshop will be held September 13-14, 1990, at Mount Saint Vincent University, Halifax, Nova Scotia. The two day workshop is intended to bring scientific experts on the endangered Atlantic coastal plain flora together with representatives from conservation bodies and governments. Two days of talks and panel discussions are planned. A two day field trip is scheduled to begin Sat. Sept 15, and will ac-

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quaint participants with coastal plain communities along lakeshores and in bogs in southwestern Nova Scotia. For further information contact:

Irene Wisheu  
Department of Biology  
University of Ottawa  
Ottawa, Ont. K1N 6N5 Tel: (613) 564-2360  
Fax (613) 564-5014



## 24th Plant Development Workshop

The 24th Plant Development Workshop took place on Saturday 31 March 1990 at the Royal Ontario Museum in Toronto. Dr. Pamela Diggle (University of Toronto) opened the workshop with a talk on "Development and evolution in plants: issues and approaches," and Dr. Keith Stuart Thomson (Academy of Natural Sciences, Philadelphia) gave a closing address, "Development, systematics, and the evolution of major morphological novelties." Between these two talks there were nine contributed papers and four posters whose topics ranged from development in leaves, roots, shoots, and cultured embryos through pollination biology, hybridization and apomixis, to the systematic implications of pollen form and function in sea grasses.

The first Plant Development Workshop was held in the Fall of 1977 at McMaster University in Hamilton, and subsequent ones have occurred semi-annually until recently, at different sites in southern Ontario. Researchers in Ontario and adjacent areas use the workshops to report results, and exchange ideas in an informal setting. The workshops are especially valuable for students because of the opportunity they provide to gain experience in presenting research results.

The **25th Plant Development Workshop** will take place in early October 1990 at the University of Guelph. Persons interested in taking part who are not already on the workshop mailing list should contact the organizers of the Guelph meeting, Dr. Usher Posluszny and Dr. Larry Peterson, Department of Botany, and Dr. Jean M. Gerrath Department of Horticultural Science, University of Guelph (see specific addresses and telephone numbers on the Back Page).

-*Timothy A. Dickinson* Treasurer, CBA/ABC  
Department of Botany, Royal Ontario Museum

## Systematics Insert

Don't forget to return your completed systematics questionnaire to:

Dr. J. B. Phipps  
Department of Plant Sciences  
The University of Western Ontario  
London, Ontario N6A 5B7



## Creditview Bog

The Mississauga News carried an item on Jan. 17, 1990, which summarizes the current situation for the Creditview bog in Mississauga (west of Toronto). The developers who own the wetland have proposed a three-way participation which would result in preserving the bog and the buffer zone. The three parties involved in financing the arrangement would be the developers, the City of Mississauga, and the Province of Ontario. At the time of printing, the Environment Minister had not yet responded to the offer and the City was waiting to see what the Province would do. The original plan was for development of the wetland, but local naturalists succeeded in having its ranking upgraded, and now the Environment Minister favours preservation of the bog. The paper also contains an article in which **John McAndrews** of the Royal Ontario Museum is reported to have said that the first deposits of sediments in the area were made about 12,000 years ago. Subsequently the area dried out, and the present bog reformed, between 500 and 1000 years ago. It is heartening to see that "local naturalists" can make a difference.

-*Jocelyn Webber, Jeff Kaiser, Mississauga*



## News of Members

The April 3rd edition of the Vancouver Sun carried a colour photograph of **Vladimir J. Krajina** wearing his Order of the White Lion, which he received from Czech President, Vaclav Havel in a ceremony last month at Hradcany Castle. It was Krajina's first return to Czechoslovakia in 42 years. He received the award in recognition for his activities in the Second World War un-

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derground movement. The order is the country's highest honour, and in the accompanying article the Sun reports that Havel subsequently presented the same honour to French President Francois Mitterand.

- Mr. and Mrs. A. W. Drewry, Vancouver

**James (Jim) A. Calder** who retired from the Division of Botany and Plant Pathology, Agriculture Canada (DAO) in 1966, died at Oakville, Ontario on 14 February 1990 at the age of 75. Jim, who is probably best known for his extensive and well documented collections from Canada's north and British Columbia, authored Part I of Flora of the Queen Charlotte Islands with Roy Taylor. A tribute to Jim is planned for a forthcoming issue of The Canadian Field-Naturalist.

- Bill Cody, Ottawa



## Book Reviews

**Photosynthetic Pigments of Algae** by Kingsley S. Rowan. Cambridge University Press. 1989. 334 pp. Price \$59.50.

In common with anyone who has taken a course on algae, I remember that I alternately cursed and was amazed at the diversity of pigments which exist in these plants. Now, after having taught a phycology course for 20 years, I realize the value of using pigment patterns in helping to characterize algal groups, but still lament the necessity of burdening students with lists of chlorophylls, carotenoids and phycobilins. One of the problems for both the student and teacher has been the lack of reviews which are comprehensive in the biochemical treatment and which are written from the perspective of the phycologist, who is always trying to relate pigment patterns to the taxonomy and phylogeny of algae. Kingsley Rowan has attempted to remedy this deficiency and the result is this mine of information on algal pigments.

The book begins with a brief historical review of algal pigment research and of the development of our knowledge of the structure of the pigment complexes in thylakoid membranes. The methods for extraction and separation of chlorophylls and carotenoids are discussed and the advantages and disadvantages of various methods are pointed out. Most of the book deals, in turn, with the three pigment families (chlorophylls, carotenoids and biliproteins), emphasizing their distribution patterns among

the algal groups, but also discussing structures, biosynthetic patterns, physical properties and methods of identification. There are many tables which draw together the disparate research findings on such physical properties as absorption maxima in various solvents and Rf values for different chromatographic systems. The relatively limited current knowledge of algal pigment-protein complexes is summarized and the book ends with a brief discussion of attempts to utilize pigment patterns to construct phylogenetic trees for the algae. The 36+ pages of references provide access to the extensive literature which is scattered throughout many chemical and biological journals. The book seems relatively free of errors but I did find the odd phycological "howler" (e.g. *Vaucheria* with isokont zoospores! ).

As a phycologist I think this book is a valuable summary of current knowledge on algal pigments. I should think that the biochemists will also find much of value and I would recommend it as required reading for any botanist who aspires to a knowledge of plant diversity in general and algal diversity in particular.

- Joe Gerrath, Department of Botany,  
University of Guelph

**The lichens of Fundy National Park, New Brunswick, Canada.** (Bryologist 91(4):255-325. by Sharon P. Gowan and Irwin M. Brodo. Price U.S.\$5.50. Available from Dr. P. L. Redfearn Jr., ABLS business Manager, Department of Biology, Southwest Missouri State University, Springfield, MO 65804-0095, U.S.A.

Individual papers appearing in scientific periodicals are not usually the subject of critical reviews. However, this important booklet-length flora has been issued and priced separately by the American Bryological and Lichenological Society and is most worthy of the attention of Canadian botanists. It is the first treatment of eastern Canadian lichens which includes keys for the identification of all recorded species and it covers an area which proves to harbour an exceptionally diverse flora - 470 species within the 200 km<sup>2</sup> of Fundy National Park. Nearly three quarters of these species are new records for the flora of New Brunswick, a striking indication of how poorly documented the lichens of this province had been.

The flora is introduced by sections outlining the history of lichenological exploration in the region and the general features of the study

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area, among which a sharp gradient in elevation, climate and forest vegetation from the coast to an inland, 300 to 380 m plateau is most notable. A systematic, descriptive analysis follows of the principal lichen habitats in the park and their characteristic associations of species. A good deal of insightful, original observation is incorporated here and this section could stand on its own as an excellent introduction to the ecology of eastern Canadian lichens.

The phytogeographic affinities of the flora are summarized from Dr. Gowan's M.Sc. thesis on the subject. Species of predominantly temperate and boreal distribution comprise 56% and 33%, respectively, of the total flora, with a strong representation of oceanic species in the boreal element. A feature of outstanding interest is the co-occurrence of several arctic and tropical montane/Appalachian taxa in the coastal forests and deep stream and river ravines of the park. The oceanic character of the Bay of Fundy climate, marked by cool summer and moderate winter temperatures, and the existence of climatically similar corridors southward along the Appalachians and to the north along the Atlantic coasts, are seen as key factors in the juxtaposition of these contrasting floristic elements.

Identification keys in lichen manuals are often based largely on characters and measurements borrowed without critical re-assessment from antecedent works. Such is not the case, however, with the detailed, lucidly written keys presented here. The original data on ascospore dimensions alone represent many hours of exacting labour at the microscope and one has the overall impression that the authors have looked afresh at all the material before them. Some the longer keys (e.g. *Cladonia*: 66 couplets) would have benefitted from cross-referencing of successive dichotomies, enabling one to back-track quickly after going astray in pursuit of a match between a specimen and a name. Also, I noted a number of morphological terms for which definitions were not to be found in the suggested reference.

Comprehensive regional floras of this kind are still few and far between for North America. This has meant that students of local floras are usually obliged to acquire and make use of numerous generic monographs, European floras, manuscript keys, bilingual dictionaries and other sundry aids to identification. This exercise, while invaluable in itself, has hardly served to swell the ranks of North American

lichenologists. Works like the Gowan and Brodo flora, which stand alongside Dr. Brodo's earlier trail-blazing publications on the lichens of the Ottawa region and Long Island, New York, will make it much easier for students to gain entry into the field.

An annotated list of species concludes the work. Helpfully, both the list and the keys include provisionally named taxa (e.g. "*Baeomyces* sp. (cf. *speciosus*)") as well as lichens known from nearby southern New Brunswick but not yet recorded for Fundy National Park. Among the many species new to New Brunswick, 18 are also new to eastern Canada, 14 new to Canada as a whole, and 5 new to North America. This impressive number of major range extensions is suggestive of how widely the authors have had to cast their net in order to document the flora of one small area.

Drs Gowan and Brodo undertook their study of the lichens of Fundy National Park "through a desire to provide the groundwork for a lichen flora of the Maritime Provinces". It is to be hoped that this goal will guide and stimulate further investigation of the lesser known parts of the region. Certainly the present work sets a high standard and shows the way forward.

- S. R. Clayden, Natural Sciences Division,  
New Brunswick Museum

**The Origins of Angiosperms and their Biological Consequences.** Edited by Elsie M. Friis, William G. Chaloner, and Peter R. Crane. Cambridge University Press, Great Britain. First published 1987; paperback edition, 1989. Price US \$24.95 plus shipping and handling.

In nine contributed papers, authors review hypotheses on the origin, diversification, and relationships of the angiosperms, as well as the development of interactions between angiosperms and their pollinators, dispersal agents, and herbivores. The majority of the contributions were presented at a symposium held during the Third International Congress of Systematic and Evolutionary Biology at the University of Sussex, Brighton, England in August 1985.

Because of the multidisciplinary nature and appeal of the book, the editors contributed an introductory chapter briefly characterizing the angiosperms with respect to other groups of plants. Other excellent additions to the book

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are a glossary, a stratigraphic table of units used in the book, and a conspectus of classification of the major animal and plant groups which includes every genus mentioned in the text.

Although the papers are based on a five-year-old symposium, they still present much of the currently held theories on angiosperm origin and relationships. Each paper is well written, organized and edited. All contributions include a broad review, as well as the presentation and interpretation of new data. A few papers are fairly technical and, therefore, less accessible to a broad readership. References appear current and provide an excellent source for further investigation of a specific topic.

It is no surprise that this book should now be available in paperback. I am sure that the hardback edition was well received. At US\$24.95, I recommend it to researchers, faculty, and graduate and advanced undergraduates interested in evolutionary biology.

-Terrence Walters, Fairchild Tropical Garden,  
11935 Old Cutler Road, Miami, Florida 33156.

### New Books

**Pembina Hills Flora**, by H. H. Marshall \$10.95 plus \$3.00 handling.

This book contains three black and white illustrations, eight chapters, and is 83 pages in length. It is available from the Morden and District Museum, Inc., P. O. Box 728, Morden, Manitoba, R0G 1J0.

### Books For Review

We, (the Editors), receive many books for review. Members may have noticed that most of our reviewers are from Guelph. In order to try to remedy this, we have decided to publish a list of some of the books that we have received, that members might like to review. If you are interested in reviewing any of the books below, call Usher (telephone number is listed on the back page) or write. We will be glad to ship the book

to you. The honorarium for being a reviewer is that the book is yours.

**Robert, D., & J.-C. Roland.** 1989. *Biologie Végétale. Caractéristiques et stratégie évolutive des plantes. Tome I. Organisation cellulaire.* Doin Editeurs.

**Gorenflot, R., & M. Guern.** 1989. *Organisation et biologie des Thallophytes.* Doin Editeurs.

**Houghton, D. R., R. N. Smith & H. O. W. Eggs.** 1988. *Biodeterioration 7.* Elsevier Applied Science.

**Lalumière, R., & M. Thibault.** 1988. *Les forêts du parc national de la Mauricie, au Québec. Études Écologiques 11.* Les Presses de l'Université Laval.

**P. C. Stanwood & M. B. McDonald.** (Eds.) 1989. *Seed Moisture.* Crop Science Society of America Special Publication Number 14.

**Causton, D. R.** 1988. *Introduction to Vegetation Analysis. Principles, practice and interpretation.* Unwin Hyman.

**Auld, B. A., K. M. Menz, and C. A. Tisdell.** 1987. *Weed Control Economics.* Academic Press.



# OFFICERS OF CBA/ABC 1989/90

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## THE LAST WORD: (Jean M. Gerrath)

One of the inserts in this edition of the Bulletin is the list of speakers for symposia and submitted papers at the meetings at **Windsor**. The actual Abstracts will be handed out with the Programme when you register. We hope that the list of speakers as well as the associated field trips and workshops will encourage those of you who have not already registered to do so. Remember, the deadline for early registration is May 1. See you there.

**NOTE: The deadline for the July issue is June 15.**

The Bulletin of the Canadian Botanical Association:

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