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BULLETIN

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PATRON

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

PATRON

SON EXCELLENCE LA TRÈS HONORABLE JEANNE SAUVÉ,
C.P., C.C., C.M.M., C.D., GOVERNEUR GENERALE DU CANADA

A NATIONAL PLANT CONSERVATION PROGRAMME FOR CANADIAN BOTANIC GARDENS

National activities in the field of plant conservation in Canada are currently centered around two main programmes. The Plant Gene Resources of Canada Programme (PGRC), under the jurisdiction of Agriculture Canada, is concerned with crop plants of economic importance. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC), under the jurisdiction of the Canadian Wildlife Service, is primarily concerned with habitat preservation. In addition to these two programmes, several other agencies have concerned themselves with the conservation of rare native plants. The National Museum of Natural Sciences, through its Rare Plant Atlas Project (NMC Syllogeus series), has provided lists of rare native species for most Canadian provinces and territories (Ontario, Quebec, New Brunswick, Nova Scotia, Manitoba, Saskatchewan, Alberta, and the Yukon). The University of Guelph, through its "Ontario Rare Plant Programme", is the only Botanic Garden in Canada which has made a formal statement concerning rare plant conservation and which has taken steps toward backing up this statement with a collections policy.

The need for a national programme concerned with the conservation of cultivated collections of rare native and non-native species was identified during the annual meeting of the American Association of Botanic Gardens and Arboreta (AABGA) in Edmonton, June, 1984. A discussion among directors and other representatives of Canadian Botanic Gardens and Arboreta, Don Falk, of the newly formed American Center for Plant Conservation, and Gren Lucas (IUCN, KEW) resulted in a suggestion that the Canadian Plant Conservation Programme (CPCP) be founded.

During the fall of 1984, the Devonian Garden assumed the responsability of initiating a draft outlining some ideas for the organization and definition of the Programme's rationale and objectives.

In the draft, it was proposed that a Canadian Programme would fill three important needs of Canadian Gardens. First, an information network among Canadian Botanic Gardens would be an effective development in relating individual efforts to local, national, and international groups, including those with scientific and commercial interests as well as non-professional bodies such as horticultural and natural history societies. Second, a Canadian Programme would complement, and be complemented by, other plant conservation programmes such as the American Center for Plant Conservation, the National Council for the Conservation of Plants and Gardens

(Britain), and the Botanic Gardens Conservation Coordinating Committee of the IUCN Conservation Monitoring Center. Interfacing with national and international conservation programmes would bring Canadian Gardens into closer touch with current conservation philosophies and strategies. Third, a Canadian Programme would fill an acute need for the provision of a national and professional avenue of communication among Botanic Garden staff and students about conservation programmes involving plants in cultivation, gardens, and plants and their natural habitats in Canada.

Seven specific objectives of the Programme were outlined.

1. To promote research into the propagation and maintainance in cultivation of genotypes considered rare, threatened or endangered.
2. To organize a central secretariat (Canadian Centre for Plant Conservation) which would coordinate a national inventory of specialized collections maintained at Canadian Botanic Gardens. This might also be extended to the identification and listing of rare and threatened plants in private gardens.
3. To produce and circulate a newsletter to contributing institutions and individuals. Topics would include items of professional interest to conservationists and keen amateur plantsmen.
4. To provide an advisory service to individuals (professional or amateur, academic or commercial) which would locate materials (i.e. specific genotypes) for research, propagation, distribution or reintroduction.
5. To assist in, and/or provide political and/or logistic support for the conservation of valuable plant collections and/or species in danger of being destroyed.
6. To sponsor a programme ensuring a uniform signage system to identify (to the public) participating gardens and their specific major collections. (This would inform the public of the program and help them understand its objectives).
7. To encourage systematic maintenance of various plant groups at their most appropriate geographic centres.

Finally, the brief included a proposal for the establishment of a national Botanic Garden data base using the Stanford Public Information and Retrieval System. The SPIRES program offers "user-friendly" access, update, and output protocols and is already in use at two major University Botanic Gardens in Canada (University of British Columbia, University of Alberta). It also has the capacity to "down load" to micro users.

The brief, plus a short questionaire, was sent to Canadian botanical institutions which had a proven mandate for maintaining living collections, as well as to institutions and/or individuals involved in plant conservation in Canada.

Comments on the draft were positive, but many concerned the need to clarify at the outset of the Programme what species would be covered. Based on respondent's comments, we propose that the CPCP focus efforts on cultivated plants of two categories.

Category 1: Rare wild plants of Canada in cultivation. In this case, rare indicates that the species has a small population in Canada which is limited either by its distribution (eg. northern limit of its range) or by its Habitat.

Category 2: Rare or uncommon cultivated species (and ornamental varieties) of either genetic or historic significance to Canada.

The data base for species included in the first category (Rare wild plants of Canada in cultivation) will be restricted to the following elements.

1. TAXON
2. GARDEN
3. ACCESSION NO.
4. NO. OF PLANTS
5. ORIGIN
6. TIME IN CULTIVATION

More detailed records are presumably available at contributing institutions and it seems unnecessary to contemplate storing more elaborate fields of elements this time. On October 1, 1985, Canadian Botanic Gardens will receive a master list of rare plants of Canada compiled from the NMC Syllogeus series. We will ask that species on the list and cultivated at each particular Garden be checked off and annotated according to the elements listed above and that the annotated list be returned to the Centre. On receipt of these completed checklists, a national inventory will be compiled and all contributing parties will receive a copy of the results with the first issue of the Canadian Botanic Garden Newsletter which will be circulated April, 1986.

Concerning "Category 2" [Rare or uncommon cultivated species and (ornamental varieties) of either genetic or historical importance to Canada], we will be requesting that each Garden identify collections which they feel have significance as stated. Constructing the data base for this category is under review until an initial list has been obtained.

Further information on the Canadian Plant Conservation Programme and its objectives and progress can be obtained by contacting The Canadian Centre for Plant Conservation, The Devonian Botanic Garden, University of Alberta, Edmonton, Alberta, T6G 2E1.

R.S. Currah
E.A. Smreciu
P.N.D. Seymour
Devonian Botanic Garden
University of Alberta
Alberta

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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: J. E. MacDonald, Dept. Forest Resources, Univ. New Brunswick Bag Serv. #44555, Fredericton, N. B. E3B 6C2

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

Phycology Section
Chairman: G.G.C. Robinson, Dept. Bot., Univ. Manitoba, Winnipeg, Manitoba R3T 2N2

The results of the ballots for the election of the new executive in the Phycology Section are as follows:

Lewis Brown	14
Pamela Stokes	13
Rod Bollman	10
Gordon Goldsborough	1

Accordingly, one must congratulate Lewis Brown for being voted chairman of the Phycology Section.

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

Systematics & Phytogeography Section
Chairman: K. E. Denford, Dept. Botany, University of Alberta, Edmonton, Alberta T6G 2E9

CBA/ABC REPRESENTATIVES TO BCC

Executive	Member: I.E.P. Taylor
Council	L. Brouillet I. Brodo

CALL FOR NOMINATIONS - EXTERNAL AWARDS 1987

The CBA/ABC invites its entire membership to make nominations for the following two Awards by other organizations. All nominations will be considered by the CBA/ABC Awards Committee, and one name for each award will be submitted to the appropriate organization, assuming sufficient merit for endorsement of the nomination by the Association. All nominations should be as strong as possible.

Biological Council of Canada Gold Medal

The Gold Medal Award of the BCC is made annually to a member of a constituent society **who has made outstanding contributions to the advancement of biology in Canada.** Such contributions are not intended to be solely in scholarship; significant service in national agencies, institutions and societies will also be recognized.

The individual societies are expected to forward nominations from their members to the BCC Gold Medal Committee, and this is taken as endorsement of the nominee(s) by the Society. Nominations for the Award must be submitted in writting, and will stand for 3 years, although they should be revised annually and may be renewed.

A nomination for the Gold Medal must contain a citation drawing attention to all the achievements that should be considered by the Gold Medal Award Committee, with stress laid on those of particular significance. This must be accompanied by an up-to-date curriculum vitae (information about graduate

students and post-doctoral fellows supervised is important), and a list of publications. It is not necessary to have extra letters of support from individuals.

John and Alice Tyler Ecology/Energy Prize

This international prize is awarded to individuals or organizations for outstanding achievements benefiting mankind. Nominees can be associated with any field of science. The term "organization" includes universities, foundations, corporations or other types of organizations.

Prizes are awarded for the protection, maintenance, improvement and understanding of ecological and environmental conditions anywhere in the world; or for the discovery, further development, improvement or understanding of known or new sources of energy.

Nominations must include the name and address of the nominee (or administrative office of an organization), summary of accomplishment, detailed description of the contribution (including publications or other evidence), and 3 letters of recommendation plus the names of 3-5 further referees. Nominations will stand for 2 years.

Please submit nominations for either of these Awards to the Chairman of the CBA/ABC Awards Committee before December 31, 1986, with all necessary documentation:

Dr. Luc Brouillet
Université de Montreal
Institut de Botanique
4101 Est Rue Sherbrooke
Montreal
Quebec H1X 2B2

BOTANICAL NOMENCLATURE

The Nomenclature Section of the International Botanical Congress will meet in Berlin during the week immediately prior to the main sessions of the XIV Congress, i. e. from July 20-July 24, 1987. The Nomenclature Section's main function is to consider proposals to amend the International Code of Botanical Nomenclature (see Taxon 32: 660-661, 1983).

Any registered delegate to the Congress may attend the Nomenclature Section and exercise a personal (non-transferable) vote. In addition, plant taxonomic institutions are entitled to votes on a scale of 1 to 7, depending on the size and taxonomic and nomenclatural activity.

A list of the votes held by Canadian institutions at the last Congress in Sydney in 1981 is appended. An asterisk indicates that the institution was represented. The Bureau of Nomenclature of the Congress and the General Committee on Botanical Nomenclature are currently revising the entire list of institutional votes, some of which may have to be reduced in view of a decision at the last Congress to limit any one institution, "even in the wide sense of the term", to 7 votes. If any taxonomic institution feels that it has been unjustly omitted (or the converse), the responsible authority on the institution (normally the Director of the Herbarium) should contact the Secretary of the General Committee (Dr. E. G. Voss, University of Michigan Herbarium, North University Building, Ann Arbor, Michigan 48104, U.S.A.). If further information is needed, please write or give me a call (613-564-2336).

John McNeill
Dept. of Biology
University of Ottawa
Ottawa, K1N 6N5

Canadian Instutional Votes (1981)

* Edmonton (ALTA)	1
* Guelph (OAC)	1
* London (UWO)	1
* Montreal (MT)	1
Montreal (MTJB)	1
Montreal (Ste-Anne-de-Bellevue,MTGM)	1
* Ottawa (CAN etc.)	5
* Ottawa (DAO)	3
* Ottawa (DAOM)	3
Quebec (QUE)	1
Saskatoon (SASK)	1
* Toronto (TRT)	1
Toronto (TRTC)	1
* Vancouver (UBC)	2
* Victoria (DAVFP)	1
* Waterloo (WAT)	1
Winnipeg (WIN)	1
* Wolfville (ACAD)	1

* Represented at Sydney. The abbreviations are those used for herbaria in Index Herbariorum (ed. 7) (Regnum veg. 106).

HERBARIUM NEWS

On April 16th, 1986, the staff and volunteers at the National Herbarium of Canada celebrated a milestone in the growth of CAN, the accessioning of the 500,000th vascular plant. The species selected, Astragalus alpinus, was one of several thousand specimens collected by Dr. Sylvia Edlund of the Geological Survey of Canada and donated to the Herbarium as documentation of her botanical research in the Arctic over the past 15 years. One of the species collected by Dr. Edlund was selected to mark the occasion as a symbolic reaffirmation of the Museum's interest in the Arctic, and its co-operation with other governmental departments in the study of the Canadian flora. As of April 1986, the National Herbarium had

reached a cumulative total of 834,412, a figure that includes 502,747 vascular plants (CAN), 216,627 bryophytes (CANM), 92,804 lichens (CANL), and 22,234 algae (CANA).

Erich Haber
Botany Division
National Museum Natural Sciences
Ottawa, K1A 0M8

GRADUATE STUDENT INITIATIVES IN CONSERVATION

The defense of a significant wetland complex in Ontario is being coordinated on behalf of the CBA/ABC by Steve Varga, graduate student at Erindale College, U. of T. Based on his own experience, Steve prepared detailed position papers on the marsh, marshalled the assistance of the Canadian Environmental Law Association and has been involved in organizing an effective letter writing campaign to save the area. Whether hearings will be scheduled now is not clear. However, CELA will be acting on behalf of the marsh in the event that hearings do become necessary in order to preserve it. The mandate of CELA has changed somewhat in recent years, and the fact that Steve was able to persuade it to help with this issue is a considerable accomplishment.

It will be recalled that Steve in 1981 called for hearings under the Environmental Assessment Act because highway construction work affecting White Rose Bog was proceeding although it had not yet been approved. As a result The Honorable James Snow, Ontario Minister of Transportation and Communications, and his deputy minister, personally paid fines of $6300 for illegal highway building activities.

Steve and all the members of the Botany Conservation Group at U. of Toronto deserve considerable commendation for their efforts.

PLANT-SOIL INTERACTIONS AT LOW pH, a Symposium sponsored by Agriculture Canada and The University of Alberta

Grand Prairie, Alberta, Canada
July 20-24, 1987

An understanding of the physiology, ecology, and chemistry of plant-soil interactions at low pH is of interest to botanists, soil scientists, ecologists, agriculturalists, and foresters. The intent of this symposium is to bring together scientists to discuss the multidisciplinary aspects of the acid soil problem. Keynote addresses, symposia, and contributed papers will address the following areas:

aluminum and manganese phytoxicity and tolerance,

chemistry of acidic soils,

ecology of the rhizosphere,

plant nutrition in acidic soils,

breeding plants for acid tolerance,

problem solving in agricultural and forestry production, and land reclamation.

The program will also include tours of areas of regional soil acidity and the Agriculture Canada Research Station at Beaverlodge, Alberta. Contact Dr. K. G. Briggs, Department of Plant Science, Faculty of Agriculture and Forestry, University of Alberta, Edmonton, Alberta, Canada, T6G 2P5.

ANNOUNCING A NEW JOURNAL

Canadian Horticultural History, an interdisciplinary journal to be published by the Centre for Canadian Historical Studies (CCHHS), Royal Botanical Gardens, Hamilton, Ontario, Canada.

Canadian Horticultural History will publish original research papers on the history of Canadian horticulture and related disciplines. Articles will span such diverse subject areas as historical garden restorations and resconstructions; biographies of Canadian horticulturists and landscape designers; histories of botanical gardens, arboreta, experimental stations, commercial nurseries, and seed firms; accounts of plant breeding work and plant explorations; comprehensive bibliographies; and ethnobotanical studies of native peoples and early settlers in what is now Canada and the northern United States. The wide range of interests in all phases of horticulture is interpreted in the broadest sense. There is no limit on the length of papers provided it is appropriate to content. Submission of book reviews, shorter communications and announcements of conferences is also encouraged.

Subscriptions
Institutions: $18.00 per volume (4 issues) for Canada; $20.00 for USA and overseas.
Individuals: $14.00 per volume (4 issues) for Canada; $16.00 for USA and overseas.
Single issue: $5.00. All cheques payable to: Royal Botanical Gardens (CCHHS)

Address: CCHHS, Royal Botanical Gardens, Box 399, Hamilton, Ontario, Canada L8N 3H8

POSITION VACANT

Director of the Arboretum, University of Guelph

Applications are invited for the position of Director of the University of Guelph Arboretum. The Arboretum was established in 1971 on a 134 hectare block of land and has administrative and research facilities, and a staff of 10. The position carries academic status and is a joint appointment, 50% as Director of the Arboretum and 50% in a department appropriate to the Director's discipline. The initial appointment is for a five-year term as Director and will also carry appointment at an appropriate academic rank, possibly with tenure, in an academic department.

The Director is responsible for the administration of the Arboretum's programs in teaching, research and extension and will be responsible for teaching and research in an appropriate discipline.

The applicant should have research and teaching experience and interest related to woody plants, administrative experience and an ability to work with the public. A Ph.D. or equivalent in Botany, Forestry, Horticulture, Landscape Architecture or related disciplines is desirable.

Applications should include a complete resume and the names and addresses of three references. This should be sent to:

Dr. F.L. McEwen,
Dean,
Ontario Agricultural College,
University of Guelph,
Guelph, Ontario.
N1G 2W1

Closing date is August 31, 1986, with the position being available January 1, 1987.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

The appointment is subject to final budgetary approval.

POSITIONS AVAILABLE

The University of Western Ontario, Department of Plant Sciences

NSERC University Research Fellow. The Department of Plant Sciences, The University of Western Ontario invites applications for an NSERC University Research Fellow who will complement present departmental research interests in the molecular biology of eukaryotic microorganisms and higher plants. Current areas of research include plant tissue culture, the development and assembly of the photosynthetic apparatus in higher plants, the molecular biology of maize heatshock proteins, fungal differentiation, the molecular taxonomy of yeasts and host-parasite interactions of plant pathogenic fungi. The successful candidate should have at least two years of postdoctoral experience and proven expertise in recombinant DNA techniques. The candidate is expected to develop a strong, independent research programme as well as teach at the undergraduate and graduate levels in accordance with NSERC policy. The position is for 5 years and begins May 1, 1987. The successful candidate will be nominated for a University Research Fellowship by this University in the 1986 competition. Applicants should provide a c.v., a detailed description of research interests and arrange for 3 letters of reference to be sent to the Chairman, Department of Plant Science, The University of Western Ontario, London, Ontario, Canada N6A 5B7 by September 1, 1986. In accordance with NSERC policies, this advertisement is directed to Canadian citizens and permanet residents of Canada.

"An Equal Opportunity Employer".

The University of Western Ontario, Department of Plant Sciences

NSERC University Research Fellow. The Department of Plant Sciences, The University of Western Ontario invites applications for an NSERC University Research Fellow who will complement present departmental research interests in the general area of population and community biology. The department is seeking a highly qualified individual who will enjoy interacting with a very strong existing group in plant population biology, which also has extension into related fields in the Department of Zoology. Current strenghts are in mathematical ecology, including theoretical and applied studies in the area of community structure, function and evolution; physiological ecology; autoecology of dune and weed species with special emphasis on intraspecific variation, resource allocation and seed dispersal; ecolgy, biosystematics, systematics and evolution of woody apomicts and vines with special interests in reproductive biology and succulent fruit dispersal; enzymatic analysis and evolution of lichen populations. The successful candidate will be highly skilled technically and will complement, bridge or interact with the above-mentioned fields. He or she will establish a significant research program and undertake some teaching duties, in accordance with NSERC policy. The position is for 5 years and begins May 1, 1987. The successful candidate will be nominated for a University Research Fellowship by this University in the

1986 competition. Applicants should provide a c.v., a detailed description of research interests and arrange for 3 letters of reference to be sent to the Chairman, Department of Plant Science, The University of Western Ontario, London, Ontario, Canada N6A 5B7 by September 1, 1986. In accordance with NSERC policies, this advertisement is directed to Canadian citizens and permanent residents of Canada.

"An Equal Opportunity Employer".

BIOLOGICAL COUNCIL OF CANADA

The Biological Council of Canada announces that its Gold Medal Award for 1986 will be given to Dr. David T. Suzuki, scientist and broadcaster, at the Annual Meeting of the Genetics Society of Canada, on 9 June 1986, at Universite Laval, Quebec.

The Gold Medal is awarded for outstanding service to biology in Canada, which includes public service as well as high scientific achievement. Dr. Suzuki is perhaps best-known for his CBC program "The Nature of Things", as well as a number of special programs and other serial shows on television and radio which stress the importance of human beings understanding the world of which they are part. He is active in discussions of science policy in Canada, civil rights, the protection of the environment and in committees and councils dealing with science in general. Dr Suzuki also has a world-wide reputation as an experimental scientist.

His best known scientific work involved the use of temperature-sensitive mutational changes in fruit flies, which provided a method that enables biologists to study the genetic and environmental control of developmental processes in higher organisms. He is the recipient of seven honorary degrees from Universities in Canada and the United States. Dr. Suzuki has been recognized by the University of British Columbia as a Master Teacher. He is a Fellow of the Royal Society of Canada.

Dr. Suzuki was born in Vancouver. His university education was undertaken in the United States, at Amherst College and the University of Chicago. He was a member of the staff of the University of Alberta 1962-63, following which he moved to UBC, where he has had an appointment in Zoology ever since.

Previous winners of the BCC Gold Medal Award have been

Michael Shaw, UBC, 1983
R. H. Haynes, York Univ., 1984
D. Mettrick, Univ. Toronto, 1985

The Biological Council of Canada comprises seven professional biological societies and represents some 4000 biologists from universities, government service and industry in Canada.

BOOK REVIEWS

Introduction to Bryology, by W.B. Schofield, 1985. Macmillan Publishing Co., New York, 431 pp. $45.00 U.S.

Wilfred B. Schofield textbook of Bryology is a landmark. With the publication of this treatment of bryology, we now have the first truly outstanding introduction to these significant land plants.

The first book to address the general biology of bryophytes was probably W. Ph. Schimper's Synopsis Muscorum Europaeorum praemissa introductione de elementis bryologicus tractante published in 1860, and revised in 1876. In his introductory volume of 99 pages, Schimper described for the general student, the structure, habitats, distribution, and systematics of European mosses. The summaries presented by Schimper, were for his time, excellent, and to this day this early tractante or treatise stands apart from other works of the 19th century.

One hundred and twenty-tive years later, we again have a tractante that will stand apart for years to come as the standard text in the field of bryology. Although, three other textbook-type books of bryology have been available in the past 30 years, all of these are either largely restricted to structural accounts (Parihar 1965, Vashishta 1978), or have few illustrations and are organized in a manner difficult for beginning students to understand (Watson 1974).

Introduction to Bryology consists of 25 chapters, a glossary of terms, 10 appendices and a comprehensive index. The glossary of 13 pages presents clear definitions, while the 12 page (double column) index references the topics as well as occurrence of a taxon. Among the 10 appendices are such diverse topics as methods of culturing bryophytes, processing bryophyte collections, and squash techniques for cytology. All of these are done accurately, and add greatly to the technical usefulness of this book.

Of the 25 chapters, 16 are devoted to individual subclasses or orders of bryophytes. The remaining nine deal with such topics as evolutionary trends, genetics, ecology, chemistry, physiology, and geography. Each is ended with a Bibliography of from 5 - 80 important references.

The information presented in the 61 chapters on the major bryophyte groups is concisely organized. The presentation is clear and I personally like Dr. Schofield's writing style. The amount of information on each is, in my opinion, perfect. The life history, gametophyte, and sporophyte are each presented with accurate details. I especially have appreciated the sections on germination patterns and development, both bringing a certain dynamic influence to morphology. The chapters on ecology and on physiology are nicely organized introductions to these topics; perhaps they could present more material in some areas. The geography chapter is well done, with numerous maps of distribution patterns. Likewise, numerous family, generic, and species lists representative of endemic and other particular distribution patterns present an impressive amount of data for the student to have reference to. Included here is a short discussion of plate tectonics and dispersal mechanisms. These factors of distribution and a more detailed synthesis of these patterns might well be expanded when a second edition is printed.

The highlight of this textbook, and one that should win Professor Schofield awards, if not high acclaim is the illustrations. Each group bryophytes is ricnly illustrated, both with scanning electron micrographs and with line drawings, mostly drawn by the author nimself. These illustrations, along with the dynamic writing style, set this book apart from all others.

Literature cited

Parihar, N.S. 1965. An Introduction to Embryophyta. Volume I. Bryophyta (5th ed.). Central Book depot, Allahabad. 377 pp. (First ed. 1956).

vashishta, B.R. 1978. Botany (For Degree Students) Part III, Bryophyta (5th ed.). S. Chand & Company, New Dehli. 392 pp. (First ed. 1963).

Watson, E.V. 1974. The Structure and Life of Bryophytes (3rd ed.). Hutchinson University Library, London. 211pp. (First ed. 1964).

Schimper, W.P. - 1860. Synopsis Muscorum Europaeorum. Praemissa Introductione de Elementis Bryologicis Tractante. Vol. I. Introductio I-CLIX, Schweizerbart, Stuttgartiae.

- 1876. Synopsis Muscorum Europaeorum Praemissa. Introductione de Elementis Bryologicis Tractante. Vol. I. Introductio I-CXXX, Editio secunda. Schweizerbart, Stuttgartiae.

Dale H. Vitt
Department of Botany
University of Alberta

The Vascular Plants of South Dakota (2nd ed.), , by Theodore Van Bruggen. 1985. Iowa State University Press, Iowa, pp., $ U.S.

van Bruggen has produced a very usable flora applicable to field and class studies alike. The text will

appeal to both amateur and professional, being well laid out, and of the size that can be used in the field.

The systematic treatment of the families follows Cronquist (1981) whilst the genera are listed alphabetically, with succinct descriptions and easy to use keys. The overall layout of the text indicates that the author is an educator as well as a practising systematist. The flora itself makes a very useful introductory regional floristics course manual, and includes a readable and helpfull introductory chapter dealing with such subjects as local geology, physiography and climatic factors. An overview of floristic elements and vegetation types is also included, accompanied by a usefull reference list relating to previous work of importance in this region.

The glossary of terms will be of assistance to new students of taxonomy, however, line drawings of some of the descriptive characters (e.g. leaf shape) would enhance this part of the text.

Overall, this is a flora with which students will feel very comfortable.

Keith E. Denford
Department of Botany
University of Alberta

Seed Physiology, Volumes 1 & 2, Edited by David R. Murray. Academic Press, New York, 1984. $ U.S.

It seems that historically seed research has been either the domain of the reproductive biologist or the plant physiologist. Seeds have been exhaustively, if not always perceptively, studied and, perhaps excusably, the emphasis has tended towards economically important species.

I recommend this two volume treatise because it seems to provide some synthesis to the full story of seed development from fertilization to the seedling. The editor has found an interesting cross section of expert authors and has blended 14 chapters into a fairly coherent whole. The information content is dense but I found each chapter interestingly written and controversial ideas were clearly expounded. As a resource book for general botanists and for those who are peripherally interested in seeds and their physiology, the book provides both information and perspective. For the active researcher, it puts in one place the current (1984) perceptions of major workers in the field, without providing any real insight to new directions.

It is unfortunate that the publishers have chosen to put it out of the financial reach of all but the wealthy! I am reminded of the remark attributed to W.H. Pearsall, that all texts on plant physiology should be easily disposable! The photographic reproduction, the glossy paper and the hard cover add to the cost, but the contents are already dating and, by the time I next teach my graduate courses in plant developmemt and metabolism, they will be superceded in at least some areas. At $90+ Canadian, it is a pity that few will want to buy the books. A paperback edition for, dare I suggest, $40 would have been a good buy for all kinds of botanists with a curiosity for seeds.

Iain E.P. Taylor
Department of Botany
University of B. C.

TAKEOVERS

In the climate of corporate takeovers, Academic Press Canada has succumbed to Harcourt Brace Jovanivich, Canada. I have been informed that orders in Canada for my book "Plant Biosystematics" published by Academic Press Canada, may be sent to HBJ Canada at 55 Barber Greene Road, Don Mills, Ontario, M3C 2A1. The price is Can. $64.50. Orders outside of Canada may be sent to the regional sales office of Academic Press (U.S. $54.50).

William F. Grant
McGill University

THE WESTERN SOCIETY OF NATURALISTS

ANNUAL MEETING: 27-30 December 1986

Returning to Hawaii after a 16-year absence, the Society is pleased to plan the Annual Meeting at Hilo on the Big Island of Hawaii, under the co-sponsorship of the University of Hawaii. Dr. John Chan will be the local chair, and further information regarding the meeting can be addresses to him at

Annual Meeting
University of Hawaii
Hilo, Hawaii

A series of morning symposia are planned, including: CHEMICAL ASPECTS OF PLANT/HERBIVORE INTERACTIONS, chair, Dr. Philip Taylor, National Science Foundation; GLOBAL CARBON CYCLING & FLUXES BETWEEN THE DEEP EUPHOYIC ZONE & OTHER OCEANIC REALMS, Dr. Catherine Agegian, University of Hawaii; BRACKISH AND FRESHWATER BIOLOGY, Dr. John Chan; a fourth symposium is being considered. The presentation of contributed papers by scientists and graduate students is encouraged. Deadline for abstracts is early October 1896.

ECOLOGICAL METHODOLOGY

Mirek J. Sharp and Paul A. Keddy have recently published a paper entitled "A quantitative technique for estimating the boundaries of Wetlands from vegetation data" of interest to ecologists. The abstract of this work is reproduced here.

There is an increasing need for the accurate delineation of wetlands for planning and conservation purposes. We propose a method based on vegetation zonation which requires three steps. The first step is to examine transects crossing the transition zone from marsh to upland. In each transect the uppermost occurrence of each plant species is located relative to a fixed survey point. The second step is to determine which of these species are hydrophytes (wetland plants). This is assessed using the presence or absence of morphological and physiological adaptations for growing in wet environments. Alternatively, a literature search using botanical manuals may suffice. The third step determines the upper limit of the wetland by finding the upper limit of the uppermost hydrophyte in each transect, and taking the mean value of these over all transects. This mean defines the boundary of the wetland. The method is illustrated using two marshes along the north shore of the St. Lawrence River in Ontario.

Reprint requests.:

Mirek J. Sharp,
The Landplan Collaborative Ltd
319 Woolwich Street
Guelph, Ontario N1H 3W4

Paul A. Keddy,
Dept. Biology
Univ. Ottawa
Ottawa K1N 6N5

Ref.: Sharp, M. J. & P. A. Keddy, 1986. Environmental Management 10: 107-112.

Material submitted to CBA Bulletin by Landplan.

NRCC RESEARCH JOURNALS, 1987 Subscription Rates

The new annual subscription (nonmandatory subscription with membership in CBA) rates for the journals published by the National Research Council of Canada are:

Biochemistry & Cell Biology (formerly Canadian Journal of Biochemistry and Cell Biology),	$23.00
Can. J. Botany,	$48.00
Can. J. Forest Research,	$26.00
Can J. Microbiology,	$32.00
Genome (formerly Canadian Journal of Genetics and Cytology)	$18.00

PERSONALIA

Margaret Louise Heimburger, nee Landes, a long time CBA/ABC member and a Professor at the University of Toronto, passed away on March 13 in Victoria, B. C. where she has been living after retirement from her academic duties.

SCIENTIFIC ILLUSTRATION, A Creative Source Directory

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The Guild of Natural Science Illustrators
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POSITION AVAILABLE

NSERC UNIVERSITY RESEARCH FELLOWSHIP. QUEEN'S UNIVERSITY, DEPARTMENT OF BIOLOGY

The Department of Biology wishes to nominate strong candidates for an NSERC University Research Fellowship beginning in 1987 in the area of plant population biology, emphasizing population genetics, ecology, and/or systematics. This is a five-year research position (subject to review in the third year) with limited teaching duties. Candidates should have demonstrated significant research capability beyond the Ph. D. NSERC gives preference to fairly recent Ph.D.'s. Candidates must be Canadian citizens or permanent residents by November 1, 1986. Candidates should send a curriculum vitae and a brief research proposal to Professor D.T. Dennis, Head (address below) and arrange to have three letters of reference sent. Candidates should contact the Department by September 1, 1986.

Professor D.T. Dennis, Head
Department of Biology
Queen's University
Kingston, Ontario
K7L 3N6

CBA/ABC ENDOWMENT FUND

The CBA/ABC Endowment Fund was launched in the Fall and the Terms of Reference were circulated to all members with the Annual Dues notice.

The Executive decided to use general funds to make awards in 1986. Six hundred ($600) dollars were allocated. Three students will be in Sudbury with support from the Fund. The first selection committee had a difficult time with what were very good calibre applications.

Now that the fund is working, it is time for the membership to make a second response to the capital drive. The motion to launch the Fund was passed unanimously at the AGM in London. The Membership is now on trial! If it is such a good idea to support graduate students, now is the time for each of us to donate to the Fund that will make that support tangible.

1986-87 will be the start of the drive for industrial sponsorship. The first question that we will face is "how much does your membership contribute?". The Fund is growing, so please help by adding to it, please send us a few dollars. It is all tax-deductible.

Iain Taylor

BCC REPORTS - APRIL 17-18, 1986

Iain Taylor, Luc Brouillet and Irwin Brodo represented CBA/ABC at the Biological Council Meetings in Ottawa on April 17-18.

After several years without a fee increase BCC faces ever increasing costs and is expected to ensure that funding for research is maintained as a high priority with government and NSERC. There will not be any increase in fees this year, but it is clear that member societies must ensure that their representatives costs are covered rather than passing them on to BCC. CBA/ABC nas always been a strong supporter of BCC, some think that we are too much involved. We have always had our representatives active on Council and I am very glad to note that John McNeill (a CBA/ABC Member, representing the Committee of University Biology Chairmen) is the President-elect, and that Luc Brouillet (CBA's President-elect) is a Member-at-large on Council.

The 1990 Second Canadian Congress of Biology will take place in Laval. The dates are early for CBA/ABC (May 27th-30th), but they allow attendance by all member societies.

The National Consortium (formerly Ottawa Consortium) continues on its work to lobby parliamentarians about science. BCC is represented and again a CBA member is active on our behalf.

Several matters of conservation came up and the CBA/ABC Conservation Committee seems to be cited increasingly as an effective organization run by a member society. Once again, thanks to Dianne Fahselt.

Iain Taylor

The bulletin of the Canadian Botanical Assoc.
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Advertisements for Positions Open and Classified categories may be placed at a cost of $10.00 Can. per published column inch. Advertisements by individual members for post-doctoral opportunities and Positions Wanted are carried free.

Material for inclusion in the Bulletin should reach the Editor at least one month prior to the date of publication of that issue.

To ensure prompt delivery of the Bulletin please notify the Editor 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. Paul G. Harrison, Department of Botany, The University of British Columbia, 3529 - 6270 University Blvd, Vancouver, B.C., V6T 2B1.