THE CANADIAN BOTANICAL ASSOCIATION

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BULLETIN

L'ASSOCIATION BOTANIQUE DU CANADA

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BOTANY 80

ANNUAL MEETING - 1980 - CONGRES ANNUEL

Summary of Activities

July 11 - 16, 1980 - University of British Columbia

Schedule

7-11 July (Mon-Fri): Pre-conference Field Trips

Queen Charlotte Islands:
Leader: Dr. Wilfred Schofield, University of BC
Emphasis: Bryophytes and Lichens
Depart Vancouver, Tuesday, July 8, a.m.
Return Vancouver, Friday, July 11, noon.
MAXIMUM ENROLMENT: 19

Rockies and Central BC:
Leader: Dr. Dale Vitt, University of Alberta
Emphasis: Variety of flora in the West
Depart Edmonton, Alberta, Monday, July 7, early a.m.
Arrive Vancouver, Friday, July 11, noon.
MAXIMUM ENROLMENT: 40

Alpine Central BC:
Leader: Dr. Keith Wade, Capilano College, Vancouver
Emphasis: Alpine flora
Depart Vancouver, Tuesday, July 8, a.m.
Return Vancouver, Friday, July 11, noon.
MAXIMUM ENROLMENT: 40

West Coast, Vancouver Is.
Leader: Dr. Paul G. Harrison, University of BC
Emphasis: Intertidal Marine Algae
Depart Vancouver, Wednesday, July 9, a.m.
Return Vancouver, Thursday, July 10, evening.
MAXIMUM ENROLMENT: 40

NOTE: The Rockies trip beings in Edmonton, Alberta and ends in Vancouver. All trips will involve one long hiking day. Participants should come prepared for such a trip.

11 July (Fri)	p.m.	CBA/ABC Executive Committee Meeting Registration All-Conference Salmon Barbecue
12 July (Sat)	a.m.	Registration, Opening Ceremonies All-Conference Symposium - Plants and the Indigenous Peoples of North America
	p.m.	Contributed Papers and Posters

13 July (Sun)	a.m.	Bryophyte and Lichen Field Trip (all day) to local mountains Contributed Papers and Posters
	p.m.	Laboratory Teaching in Botany Workshop Contributed Papers and Posters
14 July (Mon)	a.m.	A.B.L.S. Breakfast Contributed Papers and Posters
	p.m.	Contributed Papers and Posters
	evening	Phycological Society of America Banquet
15 July (Tues)	a.m. and p.m.	Contributed Papers and Posters BSA Ecology Section Symposium
	evening	CBA/ABC and BSA Joint Banquet and Awards BSA Presidential Address
16 July (Wed)	a.m.	Contributed Papers and Posters
	1300 hr	ALL delegates not attending ICSEB II must vacate their rooms.
	p.m.	CBA/ABC Executive Committee Meeting

*** Several one-day and half-day field trips are being planned. Times for field trips and business meetings will be arranged later.

*** Full details of the meetings will be announced in a separate BOTANY 80 mailing.

*** IMPORTANT - Members are reminded that all field trips are being coordinated through BOTANY 80. Trips must be paid for in advance, and will be filled on a first-come first-served basis. There are absolute limits on all pre-conference field trips due to limited accommodations in remote areas.

*** Delegates who plan to attend both BOTANY 80 and ICSEB II are reminded that they must register separately for each meeting. Information about ICSEB II can be obtained from Dr. G.G.E. Scudder, Department of Zoology, University of British Columbia, Vancouver, BC, V6T 2A9.

OFFICERS OF THE CBA/ABC 1979-80

President	Dr. Nancy G. Dengler U. of Toronto
Past-President	Dr. Jennifer M. Shay U. of Manitoba
Vice-President	Dr. Iain E.P. Taylor U. of British Columbia
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Dr. J.R. Maze UBC	Dr. P.F. Maycock U. of Toronto
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Dr. J.K. Morton - Editor Bulletin (ex off.)
U. of Waterloo

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General	Dr. R.I. Greyson
Ecology	Dr. Kaye MacInnes
Mycology	Dr. J.A. Traquair
Phycology	Dr. M. Munawar
Systematics & Phytogeography	Dr. Vernon Harms

AN OPEN LETTER TO ALL MEMBERS OF THE CANADIAN BOTANICAL ASSOCIATION

Dear Members:

The incorporation of the Canadian Botanical Association has now been completed. I hereby give notice that the officers and directors elected to the Board of Directors for the 1979-80 year will now officially assume the running of the organization.

I should like to take this opportunity to thank you for your forbearance during the protracted incorporation proceedings.

My best wishes to the incoming President, Nancy Dengler and her board.

Yours sincerely,
Jennifer M. Shay
December 1, 1979

A COMMENT FROM LAST YEAR'S PRESIDENT

Dr. Jennifer Shay, our President for 1978/79, made the following comment in her report to the Annual General Meeting last June.

Our chief deficiency as an Association, is that we represent only a small proportion of the botanists in Canada; our membership could and should be doubled. But to attract new members we must have something exciting to impart, a raison d'être that is sufficiently important to the present members to impel them to each seek at least one more member. To this end, we are preparing a membership brochure which we hope you will all circulate to other botanists.

Get involved! Send information re your institution to the Bulletin, news of yourself and colleagues, nominate Executive Members, nominate award winners, make suggestions and comments re Annual Meeting and local meetings. React when we seek reaction.

If you are asked to serve and help, please do so. Only with your enthusiastic support can we enlarge the role of the CBA.

NEWS FROM THE SECTIONS

Report from the Mycology Section

The first Mary Elliott Mycological Foray, held on August 25, 1979 at the Environmental Sciences Centre, Kananaskis, Alberta, was enjoyed by all 30 participants. Rain the night before provided excellent conditions for the development and emergence of a variety of fleshy fungi. Thanks to the keen eyes and enthusiasm of participants, some 60 different species were observed. A delicious chicken and mushroom dinner was provided by the staff at the Centre. They decided to be cautious and use "cultivated mushrooms". The very successful day closed with a slide-show and discussion of poisonous mushrooms. Hopefully, the foray to be held next year in the Toronto area will be equally successful.

James A. Traquair, Chairman

PATRON OF THE CANADIAN BOTANICAL ASSOCIATION

His Excellency, the Right Honourable Edward Schreyer, C.C., C.M.M., C.D., Governor General of Canada, has graciously accepted the invitation of the Board of Directors of the CBA to become the Patron of our Association.

GEORGE LAWSON MEDALS - CALL FOR NOMINATIONS

Each year the CBA/ABC invites its entire membership to make nominations for the George Lawson Medal. The purpose of the award is "To provide a collective and formal expression of the admiration and respect of botanists in Canada for the excellence of the contribution of an individual to Canadian Botany". Any botanist working permanently in Canada or having spent the greater part of his career here is eligible.

In any year, a maximum of two awards may be made, one in each of the two categories outlined below, although only a single award or no award need be made as the Awards Committee judges appropriate. The two categories are:

1. A single contribution to botanical knowledge of outstanding distinction. Commonly this would take the form of a published paper, a series of papers, a monograph or a book by a botanist at any stage in his professional career. The contribution should be of singular significance to the discipline at large.
2. Recognition of the cumulative, distinguished contributions of a senior investigator and/or teacher and/or administrator who has worked in Canada for the greater part of his career, and whose influence has contributed notably to the advancement of Canadian Botany.

In order that the Awards Committee may learn of botanists who are eligible for these awards, all members of the Canadian Botanical Association are invited to submit nominations and to consult with their colleagues for suggestions. Nominations should be accompanied by a clear statement of the nominee's contribution to botany in Canada and as much documentation as possible. Letters by others who support the nomination would also help the Awards Committee in reaching its decision. Nominations should be sent to the Chairman of the Awards Committee before April 15, 1980: Dr. Nancy G. Dengler, Department of Botany, University of Toronto, Toronto, Ontario M5S 1A1.

ADDITIONAL ABSTRACTS from the 1979 meetings.

The following abstracts were not included with those published in the July Bulletin.

Ratios in systematic studies

JACK MAZE[1], G. E. BRADFIELD[1], W. H. PARKER[2]
Department of Botany, University of British Columbia, Vancouver[1], Lakehead University, Thunder Bay, Ontario[2].

Ratios are commonly used in systematic studies to minimize size differences. However, ratios may introduce statistical artifacts that could lead to undesirable results when using multivariate methods. To test the effect of ratios, discriminant function analysis on two groups of populations was performed using untransformed variables, transformed variables derived from principal components analysis, a set of descriptive ratios, and the reciprocals of the ratios. Analyses of all types of variables gave similar results. Of the differences seen, those between ratios and their reciprocals were as great as those between ratios and untransformed variables. There is no objective way to determine which of the results most closely approximates reality. However, it should be pointed out that results from the analysis of ratios can be influenced by the choice of numerator and denominator.

Abnormal cell wall formation in elm xylem cells as a reaction to infection by *Ceratocystis ulmi*
OUELLETTE, G.B., Laurentian Forest Research Centre, Environment Canada, C.P. 3800, Ste Foy, Quebec.

TEM observations of samples from artificially and naturally infected American elm trees indicate that the normal pattern of cell wall formation in maturing xylem tissues is strikingly disturbed. Additional wall layers, some apparenly lignified, may be deposited in parenchyma cells and even in vessels. In fibres, extra layers are also formed which comprise one to several layers characteristic of tension wood. These layers are separated from one another by a thin band of loosely oriented fibrillar material or sometimes by an apparently lignified layer. The gelatinous layers often contain numerous strands of osmiophilic material oriented perpendicularly to the cell wall. These discrete strands seem continuous at times with cortical microtubules which are numerous in such cells.

Ultrastructural observations of tomato roots primary infection by *Fusarium oxysporum* f. sp. *radicis lycopersici*.
P.M. CHAREST[1], G.B. OUELLETTE[2], and F.J.PAUZE[1]
Département de Phytologie, Université Laval, Ste-Foy, P.Q.[1] CRFL, Environnement-Canada, Ste-Foy, P.Q.[2]

Fusarium oxysporum f.sp. *radicis lycopersici* is a recently named f.sp. pathogen (Jarvis and Shoemaker 1978). It causes either a wilt or a foot and a root rot of tomato plants. Ultrastructural observations of root primary infection led us to ascertain that both host cell wall and cytoplasm are strongly affected by the pathogen even if the latter is located inside the host cell or in intercellular spaces. Often, at penetration sites, some membrane and cytoplasmic-like structures are found external to the epidermis. As the pathogen progresses in the cortex, fibrillar-like or amorphous cell wall apposition material is sometimes present either near a fungal cell or in contact with an infection peg. Osmiophilic material is often traceable to the infection peg cytoplasm from intercellular or periplasmic areas. Ref. Jarvis, W. R., and R.A. Shoemaker. 1978. Phytopathology, 68: 1679-1680. This work was supported by NSERC grant A6253.

THE FOURTH PLANT DEVELOPMENT WORKSHOP

This was held on Saturday, April 7th at the Arboretum Centre, University of Guelph. The meeting, organized by Dr. R.L. Peterson and Dr. U. Posluszny, included the presentation of the following papers and posters.

PRESENTED PAPERS

1. Geotonism in plant development.
   Roger Horton and Ingrid Boesel
   University of Guelph
2. Development and ultrastructure of root nodules of Eleagnus umbellata.
   William Newcomb, Queen's University
3. The effects of tannic acid and cytochalasin B on microtubule and microfilament distribution in the radish root hair.
   R.W. Seagull and I.B. Heath, York University
4. The generation of variation in nuclear volumes in root meristems.
   D. Davidson, McMaster University
5. Histological basis of leaf dimorphism in Selaginella martensii.
   N.G. Dengler, University of Toronto
6. The structural relationships between mesophyll and bundle sheath cells in Atriplex leaves.
   A.A. Krouglicof and R.E. Dengler, Scarborough College, University of Toronto
7. The growth and development of ophioglossaceous gametophytes under various cultural conditions.
   D.P. Whittier, Vanderbilt University.
8. Calcium distribution in globoid crystals of Cucurbita cotyledon protein bodies.
   John N.A. Lott and Ernest Spitzer, McMaster University

POSTERS

1. The recognition of proteins modified by 2,4-D during plant tissue culture.
   R. Waern, University of Guelph
2. Structure of the meristem and cap of Ephedra roots.
   R.L. Peterson and Janet Vermeer, University of Guelph

The workshop was well-attended, attracting about fifty people, including faculty, graduate students and technicians. This was quite remarkable considering that the workshop was held only one day after one of the worst storms of the winter in the Guelph area.

The discussion session in the afternoon proved once again to be stimulating and useful. The first topic dealt with the problems of doing graduate work in plant development and was very aptly led by John Turnbull, a graduate student with Dr. R.L. Peterson at the University of Guelph. One of the main points raised was the lack of information or at times the misinformation provided to prospective graduate students. It was agreed that more Honours Botany students should be invited to future workshops in order to expose them to the informal exchange of ideas that occurs at these meetings. The other topic discussed was that of cell differentiation. The problem of deciding what constitutes differentiation in a plant as opposed to an animal system was clearly outlined by Dr. D. Davidson of McMaster University.

Plant Development Workshops are held twice yearly on a Saturday at some university in Southern Ontario. The fall meeting is being organized by Dr. C. Peterson and will be held at the University of Waterloo in October. Anyone requiring additional information on the forthcoming meeting should contact Dr. C. Peterson, Dept. of Biology, University of Waterloo, Waterloo, Ontario N2L 3G1. All interested individuals are welcome to attend.

V. Posluszny

THE DOUGLAS H. PIMLOTT CONSERVATION AWARD

Congratulations to Jennifer Shay, our Past-President, who was named the first recipient of the Douglas H. Pimlott Conservation Award by the Canadian Nature Federation. The award recognizes Jennifer's outstanding contributions to conservation, in particular, her role in establishing ecological reserves in Manitoba, and ensuring the preservation of the St. James Prairie, one of the last remaining areas of tall grass prairie in Canada.

MARY E. ELLIOTT SERVICE AWARD - CALL FOR NOMINATIONS

The Canadian Botanical Association has established this award for meritorious service to the Association. The award can be made from time to time as recommended by the Awards Committee. Recipients of this award have been Dr. John K. Morton in 1978 and Dr. Paul R. Gorham in 1979.

Nominations, including a citation of approximately 100 words, should be submitted to the Chairman of the Awards Committee before April 15, 1980: Dr. Nancy G. Dengler, Department of Botany, University of Toronto, Toronto, Ontario M5S 1A1.

CANADIAN RESEARCH JOURNALS

The following is an extract from a letter received from Dr. George Setterfield and dated November 16, 1979.

"As you probably know, I recently circulated for signature a petition-type letter, addressed to Dr. B. Gingras of NRC, concerning government plans to 'privatize' the Canadian Research Journals. I personally sent the letter to members of only three societies with which I have been involved: the Canadian Society for Cell Biology, the Canadian Society of Plant Physiologists, and the Canadian Botanical Association. I thought members of these societies might be interested in the response I obtained." In all, 861 signatures were received. "I consider the response excellent, particularly taking into account the very rushed nature of the appeal. It is clear that a considerable number of biologists from a wide range of institutions and many sectors of the field are concerned about this situation."

"Several other individuals circulated the same petition to other societies and Dr. Gingras told me this morning that the total number of signatures is in excess of 1,700. I got the impression from him that the petition has provided important ammunition in the campaign to reverse the government's plans."

"Let me say, though, that the battle is not yet won. Mass petitions are not the only approach. I would suggest that scientists concerned about our journals should express their concern directly to both their own MP and to the Minister of Science and Technology in a personal letter. I sense that the Minister, in particular, is receptive to input from the scientific commmunity. Perhaps it is a good time to write him about all of our feelings on recent science policy (or lack of it) including the recent boost to NSERC funds."

"Finally, I would appreciate it if your would express, through your newsletter, my thanks to the hundreds of biologists who signed the letter."

THE SARAGUAY FOREST CONTROVERSY

In July 1977, the Société d'Horticulture et d'Ecologie du Nord de Montréal (SHENM), a group of citizens interested in horticulture and in environmental quality, became aware of the ecological value of the Saraguay forest and started a long fight to preserve this exceptional site.

Soon after the members of the SHENM brought attention to this 220 acres of sugar maple-hickory forest within the city limits of Montreal, several societies, such as the "Société d'Animation du Jardin et de l'Institut botaniques" (SAJIB), joined the movement to save this relatively undisturbed forested tract of land threatened by a housing development. The SAJIB, with the SHENM, organized guided tours of the forest. Those visits, an educational approach rather than an activist one, were an important step. For instance, on July 29, 1978, more than 300 citizens visited the forest and became efficient supporters because they knew what they might lose. A special issue of the "Bulletin de la SAJIB" was published explaining the controversy and describing the forest (Barabé and Bouchard, 1978). Support came from numerous sources. The Canadian Botanical Association sent a letter to Mayor Jean Drapeau on June 14th, 1979. Dr. Jennifer M. Shay, past-president of the CBA/ABC wrote the letter on behalf of the Canadian Botanical Association. She presented the experience of the Living Prairie Museum established in 1974 in metropolitan Winnipeg: "The Living Prairie Museum has become the focus of education programs, recreation and research. Annually from May until October it is the scene of nature forays for young and old alike, and has become a major attraction". She concluded her letter by writing: "You are extremely fortunate to have such a remarkable remnant of rich natural forest in urban Montreal. By designating it as an ecological Park, you can ensure that it will be preserved intact for the enjoyment of present and future generations." The controversy received wide coverage in the media (Bouchard, 1978 and 1979).

Responding to public pressure, the city of Montreal, on July 11, 1979, officially asked the Quebec Government to intervene, claiming it did not have the appropriate legal tools to act in this precise case. On July 21st, 1979, the Minister of Cultural Affairs published in the Quebec Official Gazette the Government's intention to classify Saraguay as a natural area of "arrondissement naturel". The immediate effect was to stop all development without having to expropriate.

Meanwhile, the Municipal Affairs Minister, M. Guy Tardif, offered substantial financial assistance to the Montreal urban community to help create intermunicipal parks. At the end of August 1979, the "Commission des Biens Culturels", an advisory body to the Minister of Cultural Affairs, held public hearings in Montreal. The submitted briefs from natural history societies, pressure groups, the city of Montreal and citizens supported the proposal for preserving the Saraguay forest. However, disagreements existed on the exact limits. Furthermore, several groups expressed their concerns on how and by whom the forest should be managed. Following these hearings, the "Commission des Biens Culturels" submitted its report recommending that the Government of Quebec classify permanently the site and encourage public participation for its management at the local level. The next step will be the classification of Saraguay as a permanent natural area by the Government of Quebec. This latter decision needs cabinet approval. It would then become a major and permanent victory for conservationists.

When Saraguay has definitely been saved, serious and difficult issues will still need to be resolved, such as a management plan, carrying capacity and public participation. The collaboration of the Canadian Botanical Association will be most useful at this crucial stage because very little expertise exists on how to manage an ecological park within the limits of a major city.

André Bouchard

REFERENCES

Barabé, D. et A. Bouchard (eds.) 1978. Numéro spécial: Saraquay. Bulletin de la SAJIB 4(1): 1-52.

Bouchard, A. 1978. Bibliographie des articles et rapports mentionnant le boisé de Saraguay depuis 1977. Bulletin de la SAJIB 4(1): 48-52.

Bouchard, A. 1979. Bibliographie des articles et rapports mentionnant la forêt de Saraguay II. Bulletin de la SAJIB 4(4), in preparation.

LES FLORALIES INTERNATIONALES DE MONTREAL - MAY 17 TO SEPTEMBER 1, 1980

Montréal, in 1980, will be the site of the Floralies internationales. Approved by the International Association of Horticultural Producers and the International Bureau of Exhibitions, the Floralies internationales de Montréal will serve as the theatre for the first meeting in America of the world's major horticultural traditions.

The purpose of this floral exhibition is to foster the development of all forms of ornamental horticulture and to demonstrate the progress achieved by horticulture at the international level.

In addition, the exhibition will stimulate research in the areas of plant cultivation and horticultural teaching. It will also serve to inform the public about the ecology and its problems and about the importance for all people of living in a healthy environment.

Finally, the Floralies internationales will illustrate important links between man's sociocultural activities and his physical environment.

The Floralies internationales de Montréal will exhibit countless varieties of trees and flowers, which will be continually replaced, between the months of May and September.

From May 17 to 29 the Olympic Vélodrome will be transformed into a valley of flowers lovingly arranged by horticulturists from around the world. Experts from some twenty countries will vie in dexterity and imagination with Canadian growers in paying tribute to the beauty and diversity of the world of flowers for the pleasure of the hundreds of thousands of expected visitors.

From May 31 to Sept. 1 the Ile Notre-Dame, which was built in the St. Lawrence River for Expo 67, will begin its new vocation as a permanent flora parkland, incorporating the most recent develoments in contemporary landscape art. After the festival, the island will retain the permanent floral display, comprising a selection of the best kinds of trees, shrubbery and cultivated flowers, and become a recreational area devoted to increasing the awareness of the general public about ecological and cultural matters.

The government of Québec is responsible for the organization of the Floralies Internationales but it has called on the Montréal Botanical Garden, the third largest garden in the world, to co-ordinate the horticultural displays.

For more information write to: Les Floralies internationales de Montréal, Bureau du Commissaire général, 360 rue Saint-Jacques, Montréal (Québec) Canada H2Y 1P5.

THE ASSOCIATION FOR BIOLOGY LABORATORY EDUCATION (A.B.L.E.)

An international group of biologists involved in teaching undergraduate biology laboratories met recently in Calgary, Canada and formed the Association for Biology Laboratory Education (A.B.L.E.). The organization was inaugurated with a series of workshops presenting specific creative laboratory exercises. One function of the Association will be to publish and disseminate material presented at the annual workshop sessions. The Association plans to publish a newsletter called Labstracts and is establishing a clearing house for laboratory teaching materials, exercises, organisms and techniques.

The second annual meeting will be held at the Urbana campus of the University of Illinois, June 2 to 6, 1980. Future meetings are planned at the State University of New York at Stony Brook in 1981 and at Stanford University in 1982. Membership is open to anyone involved or interested in laboratory instruction at the post-secondary level at a cost of $10 US per annum. Persons interested should contact Rosalie Talbert, Treasurer - A.B.L.E., Department of Biology, Nassau Community College, Garden City, New York 11530.

Officers elected at the first meeting were: President Don Igelsrud, University of Calgary; Vice President - Joseph Larsen, University of Illinois; Secretary - Anna Wilson, Purdue University; Treasurer - Rosalie Talbert, Nassau Community College; Directors at Large - Marcia Allen, Stanford University; William Elliott, Hagerstown Junior College; Eugene Kaplan, Hofstra University and Jenny Xanthos, McGill University.

The organization has four main committees, and persons interested in specific problems should contact the appropriate committee chairman. The Workshop Committee is chaired by Don Fritsch, Department of Biology, Virginia Commonwealth University, Richmond, Virginia 23284. The organization will publish the proceedings of the annual workshop under the editorship of Jon Glase, Section of Neurobiology and Behavior, Division of Biological Sciences, Cornell University, Ithaca, New York 14853. The Laboratory Biology Teaching Library is now under the guidance of Daniel Burke, Department of Biology, Mercer University, Macon, Georgia 31207. Labstracts will be edited by James Waddell, Department of Zoology, University of Maine, Orono, Maine 04473. The publication will attempt to facilitate communication among persons trying to solve similar problems by running ads to exchange ideas, organisms, equipment, etc. To help improve local communication Labstracts has five regional editors based on time zones: Eastern - Janet Emerson, Department of Biology, Emory University, Atlanta, Georgia 30322;

Central - Dennis Brown, Department of Biology, University of Winnipeg, Winnipeg, Canada R3B 2E9; Mountain - John Gapter, Department of Biological Sciences, University of Northern Colorado, Greeley, Colorado 80639; Pacific - Don Mansfield, 2509 Whittier Drive, Davis, California 95616; European - Jaume Josa, Laboratorio Biologia General, Facultad de Biologia, Universidad de Barcelona, Avda. Jose Antonio 585, Barcelona 7, Espana.

FLORISTIC CHECKLIST

At the annual meeting in Ottawa the possibility of setting up a file of checklists concerning Canada's flora in the National Museum was discussed. The main concern of proponents of the scheme was that the time and effort that goes into preparing such a checklist should not be lost just because it never results in formal publication. On a more positive note, such lists would be useful later in examining changes in vegetation that have occurred in a particular area.

Dr. J. Soper, the Chief Botanist, has agreed to prepare a list of the checklists the Museum already has on file and would be happy to receive others to include in the file. Consequently, if you have a checklist of some area, please sent it to him at the Museum of Natural Sciences, National Museums of Canada, Ottawa, Ontario K1A 0M8.

In order to increase the value of your list to other people, please provide the information indicated below, in addition to the actual list.

Both published and unpublished lists would be welcome. The aim is to prevent the loss of useful information on the Canadian flora without inordinate expenditure of either time or money on anyone's part. So please run off an extra copy and send it to Dr. Soper.

Information to be supplied with checklists (samples in parentheses)

Province: (BC)
Area covered: (Selkirks)
(Location of center (lat./long. or UTM grid)
Investigator: (Jane Smith)
Scope of study: Fieldwork (2 summers -- c. 120 day total)
Herbaria (UBC,CAN checked)
Purpose of study: (check species in areas used by elk)
Vouchers: (UBC, duplicates CAN, BC Prov. Forest Service Herb.)
Flora used for identification: (Flora of Canada)
Specimens determined by: Jane Smith
Grasses verified by S. Aiken, DAO.

ARE YOU GETTING YOURS?!

The First Circular for the 13th International Botanical Congress, to be held in Australia in 1981, has now been sent out. Your editor received four independent mailings! However, three of these did not contain the reply card, the return of which was required if one wished to receive the Second Circular. If you did not receive the First Circular, or the reply card, and are interested in the Congress, you should write immediately to the following address: 13th International Botanical Congress, University of Sydney, NSW 2006, AUSTRALIA.

BOTANICAL RESEARCH AND COLLECTING IN THE CANADIAN NORTH

Both the Yukon and Northwest Territories now have "Scientists Ordinances" that require botanists and other scientists to apply for and obtain permits before conducting any research or collecting specimens there. In addition, the federal government has instituted regulations requiring permits for various land-use purposes in the northern territories that would affect some types of botanical research. A subcommittee was appointed by the CBA Executive Committee to review the existing licensing regulations in the context of their possibly restrictive effects on botanical research in the North, and to recommend any needed action by the CBA. Although, in their legal form, the regulations appear rather cumbersome, the subcommittee to date has found little evidence that in practice they are, at least as far as botanists are concerned. But more information is needed. Anyone with personal experience in applying for the permits is urged to contact the chairman, V.L. Harms, W.P. Fraser Herbarium, University of Saskatchewan, Saskatoon, SK, S7N 0W0.

Potentially disturbing, aside from the actual licensing procedures, are the provisions in both territorial ordinances that empower the Commissioners to retain any collections or direct their disposition but, to the Subcommittee's knowledge, these provisions have not been invoked in practice for botanists. A recommendation from the CBA to the territorial governments on this issue may be in order, but then the responsibility would also fall on us to define what herbaria or types of herbaria should qualify as proper repositories for the northern plant collections. Any ideas or advice on the latter question would be much appreciated from the membership, particularly from those curating or associated with herbaria.

Requests for detailed information and applications for permits to do research or collecting in the northern territories should be addressed to the following offices:

1) Science Advisor, Government of the Northwest Territories, Yellowknife, NWT X0E 1H0.
2) Territorial Secretary, Government of the Yukon Territory, Whitehorse, Yukon Territory, Y1A 2C6.
3) Regional Manager, Land Resources Division, Department of Indian affairs and Northern Development, P.O. Box 1500, Yellowknife, NWT.X1A 2R3. (This office wishes to be fully informed of any proposed activities in the territories even though most botanical research would appear to be too small-scaled to be directly affected by the Federal land-use regulations.)

Vernon Harms

CURRENT CONTENTS

In the October issue of *The Bulletin* we reported that Current Contents will no longer list the Canadian Journal of Botany. We have now been informed that, as a result of the concern expressed by a number of people, this decision has now been reversed and the C.J.B. will continue to be covered by the Life Sciences edition of Current Contents.

CHURCHYARDS AS BOTANICAL REFUGIA

Churchyards are now known to be the most important habitats for rock growing lichens in lowland Britain reports the British Lichen Society in a recent bulletin. Of the three substrata occurring - the church itself, the memorials and the churchyard wall - it is the church walls which are often the most important of the trio since they frequently support a greater variety of species than the headstones nearby. At the present time many lichen habitats are threatened with destruction since churches are being demolished at a rapid rate. There are four situations in which churches are particularly at risk; town churches in inner areas where there are too many for current needs, churches surviving from deserted and shrunken villages, churches in isolated fields with no road access and churches in parks or former parks. The most important threat to the lichen flora of the churchyard is still the removal of memorials and it is most important that these remain untouched and in situ, not only because of their scientific importance but for their historical and aesthetic qualitites as well. The cleaning of stones should also be avoided since lichens casue little or no harm to gravestones.

UNDERGROUND FERNS

Fern enthusiasts are not unduly surprised at the often unusual places in which ferns manange to thrive but the British Pteridological Society has received a report of ferns growing 200' in and down a mine. The mine, one of the Blue John mines around Castleton in Derbyshire, has for some time had electric lighting, and where it reaches the walls has been sufficient to encourage vegetative growth in some areas. In one spot what appears to be a large clump of Athyrium filix-femina dominates a damp overhang. It is most likely that the spores have been brought down on the clothes or in the lungs of visitors to the mine, which is a tourist attraction. Moss and some other sporelings are also present.

From "Habitat Digest" No. 19

CENTRE FOR CANADIAN HISTORICAL HORTICULTURAL STUDIES FOUNDED

A Centre for Canadian Historical Horticultural Studies is to be established at the Royal Botanical Gardens, Hamilton, Ontario, through the sponsorship of the Dunington Grubb Foundation. Funding for the first year will be directed towards acquiring resource material relating to the history of horticulture in Canada.

John Bradshaw, Chairman of the Foundation, indicates that this is a logical follow-up to the feasibility study carried out in 1978 under the auspices of the Foundation, by its secretary, Art C. Drysdale. Following this study it was evident that ample material exists, and as Foundation Awards Chairman Lois Wilson points out, the artifacts will take many forms. Some will be original documents and publications, others will be reproduced by photocopy, microfilm and other photographic processes.

RBG Director Dr. Leslie Laking stated that this is not the first financial assistance provided by the Directors of the Dunington Grubb Foundation. A contribution to the building fund for the new RBG Centre was employed to create space to house an important very basic horticultural resource - a historical collection of nursery and seed trade catalogues, with special emphasis on the Canadian component. The resources pertaining to the Dunington Grubb Centre for Canadian Historical Horticultural Studies, appropriately will find their home in this same facility as part of the new library at RBG Centre.

Mr. Bradshaw emphasized that Foundation funding of $10,000 for the first year will provide the stipend for a historical researcher working on the project about half-time, some research travel and materials required. He expressed satisfaction that John B. Lord, botanist with RBG displaying both aptitude and some considerable expertise in historical research, will be sharing his time between this new challenge and his responsibilities co-ordinating the RBG Outreach Programme.

As material is assembled, Dr. Laking emphasized that it will be available at RBG to students and other researchers seeking resource materials, including, of course, information pertaining to all who have made a contribution to horticulture in Canada. For further information contact L. Laking, Director, Royal Botanical Gardens, P.O. Box 399, Hamilton, Ontario, Canada L8N 3H8.

DARBAKER PRIZE IN PHYCOLOGY

The Committee on the Darbaker Prize of the Botanical Society of America will accept nominations for an award to be announced at the Annual Meeting of the Society at the University of British Columbia, Vancouver, British Columbia, in July, 1980. Under the terms of the bequest, the Award is to be made for meritorious work in the study of microscopical algae in all its facets. At present, the Award is limited to residents of North America, and only papers published in the English language will be considered. The value of the prize for 1980 is expected to be about $425. The Committee will base its judgement primarily on the papers published by the nominee during the last two full calendar years, i.e., papers dated 1978 and 1979. Nominations for the 1980 award, accompanied by a thorough statement of the merits of the case and by reprints of the publications for 1978 and 1979 supporting the candidate, must be received by April 1, 1980 by the Chairman of the Committee, Dr. Alfred R. Loeblich III, University of Houston, Marine Science Program, Bldg. 305, 4700 Avenue U, Galveston, Texas 77550. For further information write the Chairman or call him at (713) 749-4998.

FORTHCOMING MEETINGS

Mycological Workshop

York University, Department of Biology, January 26, 1980. Jointly sponsored by the CBA and York University. The purpose of the workshop is to encourage interaction between regional mycologists with interests in the systematics, physiology, genetics, cell biology

or biochemistry of fungi. A strong effort will be made to balance the programme to evenly cover all areas of interest.

Keynote lecture by Dr. Mark Ragan, NRC Dalhousie on "Biochemical characters in fungal phytogenetics. Followed by contributed papers.

Registration $10 (students $5). For further information contact Dr. I.B. Heath, Department of Biology, York University, 4700 Keele St., Downsview, Ontario M3J 1P3. Tel. 416/667-3748.

FUTURE ANNUAL MEETINGS of the CBA/ABC

Just a reminder!

1981 Guelph, June 7 to 11.

1982 Regina, June (jointly with Canadian Society of Plant Physiologists).

1983 A meeting of all Canadian biological societies is being planned under the auspices of the Biological Council of Canada. No venue has yet been announced but it is understood that London, Ontario is a possibility.

PUBLICATIONS

Edible Wild Fruits and Nuts of Canada. Nancy J. Turner and Adam F. Szczawinski. National Museums of Canada. 1979. 212 pp. $9.95. Also available in French.

This book will be of most use to the beginner, the non-botanist interested in wild fruits and nuts seen when walking the dog or picnicking in the country since it is much easier to recognize new plants when confronted with only a few look-alikes at a time. It will, however, bring pleasure to anyone sufficiently interested to pick up the book. It will also be useful to botanists when asked to identify plants for friends and the public.

There has been space to cover only the most common and best-liked wild berries and nuts. These are arranged in 36 groups of similar or related species. Most, such as blueberries and currants, grow across Canada in a variety of forms. Other species are more regional; Oregon grape (Berberis spp.) grows in British Columbia, for instance, but the related May-apple (Podophyllum peltatum) is found in southern Ontario and Quebec.

Black and white drawings are by Oldriska Ceska, the color plates come from a variety of sources. Most are good but the dark photo of unripe Saskatoon berries is not. Latin names are included, there is a glossary of less familiar terms and a bibliography.

Again, in this volume, there is emphasis on toxicity - less upsetting than in the book on tea and coffee substitutes. Notes in the preface and with each group of plants should be carefully read on this subject as well as for their general interest.

For some readers the recipes may be of most interest. A few require ingredients from a specialty shop but many are simple enough to cook over a campfire. Some native recipes are included. It is doubtful, however, if the orginial pemmican included peanut butter and cayenne pepper.

I like this little book (and others in the series) for several reasons. The authors, as many readers of this review know, are well qualified; they have a love of their subject as well as a professional interest in the uses of wild plants. One possible drawback is that both are more at home with western plants and this has resulted in at least one omission - the purple-flowering raspberry of eastern Canada (Rubus odoratus) whose leaves and fruits are similar to those of the western thimbleberry (R. parviflorus) illustrated.

In general, the material is well researched and prepared, the book has a bright and attractive layout, wasteful of space but easy to read and use. Ring binding allows the pages to lie flat. The cover is eyecatching but does show scuff marks. The format is too large to carry easily in the field.

Edible fruits and nuts of Canada is written for Canadians about Canadian plants by botanists living in Canada. It is printed in Canada. To the writer, that is recommendation in itself. Both authors are well known in the west, Dr. Szczawinski for his involvement with the plant publications put out by the B.C. Provincial Museum and Dr. Turner for her books on the uses of plants by native peoples. An excellent gift and definitely a book to have around the house so that family and friends may become familiar with the plants around them.

Mary I. Moore

Canadian National Directory of IBP Areas: 1968-1979, third edition, edited by George H. La Roi, Thomas A. Babb, Cheryl E. Perley, Patricia R. Mortimer.

The National Directory is a condensed compilation of the ecological check sheet surveys of National and Provincial Parks, Ecological Reserves, Natural Areas, wildlife refuges and unprotected wildland areas on public and private lands in Canada completed under the auspices of the Conservation Subcommittee of the Canadian Committee for the International Biological Programme (1967-74) and its successor the Associate Committee on Ecological Reserves of the National Research Council of Canada (NRCC/ACER). The second edition contained 1309 individual summary sheets while the new third edition contains and additional 223 sheets. The directory is printed in an unbound 22 x 28 cm notebook format, divided into 10 geographic regions each with an accession list giving survey dates, and includes an Introduction, Guide and map for potential users. This publication may be purchased as a complete volume or as regional separates. Owners of the first or second editions may obtain supplements for either the complete directory or separate regions. For fuller infomation write to: Western Ecological Services Ltd., Attention: Shirley Robinson, Rm. 211, 11911 - Fairway Drive, Edmonton, Alberta T6J 1W4.

Medical Botany: Plants Affecting Man's Health by Walter H. Lewis and Memory P.F. Elvin-Lewis 1977. John Wiley & Sons.

The value of some books can only be judged with time. Medical Botany is such a book for several reasons. The Lewises have assembled a very large amount of information about plants that one way or another affect our health. The facts presented are more up-to-date on poisonous plants than the classic by Kingsbury, Poisonous Plants of the United States and Canada. After more than a year of consulting both books, I have found that together they provide answers to questions posed by the

medical staff of the local hospital toxicity centre. While such emergency calls are infrequent, the cost of the Lewises' book is work every penny, when it contributes to resolving a medical emergency involving a child who has eaten the attractive berries of English or Chinese Yew, for example.

The book is much more than just a desk reference on poisonous plants for botanists, as indicated by the table of contents. The book is divided into three sections and several appendices. Section I deals with toxic plants - internal poisoning, allergies, and mutagens. Section 2 covers plants with some curative value by the illness or organ system involved. Section 3 treats psychoactive plants - stimulants, halluginogens and depressants. Appendix I is an outline classification of the Plant Kingdom. The book is completed with an extensive bibliography and glossary.

Medical Botany is certainly not to be viewed as a full text on ethnobotany. Nor would such texts have the detailed discussion of the biology of the allergenic reaction nor diagrams of the anatomy of the human eye. The book was not intended for just M.D.s or Ph.D.s or students in a narrow discipline. Rather, it is the result of efforts to produce a compendium of botanical and medical facts for students with multidisciplinary interests. In an age of over-specialization the book attempts to bridge the ever increasing gap between the fields of botany and medicine. Not so long ago a physician was frequently his own herbalist as well. Today the botanist frequently knows little about medicine, and the physician in turn knows little about the plants that threaten and harm his patients. The Lewises are to be commended for their efforts to reunite the fields of medicine and botany.

The book has weaknesses. Being interdisciplinary it will seem too general in some cases and too detailed in others. A plant name followed by the words "considered toxic to livestock" is of questionable value without elaboration. The quality of the illustrations of cited plants are generally too small and dark. While reproductions of Renaissance herbal representations are interesting to the botanist, such illustrations generally are of little value for identification to the species level. The absence of any colour plates is regrettable, but understandable.

Medical Botany is nonetheless a useful book for the professional botanist who is called upon in a medical emergency. The book should also help the physician not familiar with the myriad ways plants can affect man and the plants themselves. Anyone teaching a course on plants and man could use this book as a text provided a second one on food plants was also required. Any student of botany interested in plant-man interactions should read this unique, interdisciplinary book.

John C. Semple

Liste annotée des plantes du comté de Lévis, Québec. Ptéridophytes et Spermatophytes. Par D. Doyon et R. Cayouette, 1978. Agr. Québec. Service de recherche en défense des cultures. Mémoire no. 2. 191 pp., 3 cartes et index.

C'est avec plaisir que j'ai pris connaissance de cet ouvrage de type floristique. En effet, c'est un exemple presqu'unique au Québec que cette liste régionale annotée de plantes supérieures. Dans ce domaine, et malgré l'absence plutôt intriguante de flore provinciale, l'Ontario est bien en avance sur nous. On y compte déjà plusieurs listes de comté, notamment dans le sud-ouest. Certes, il existe au Québec un certain nombre de travaux floristiques critiques, mais ils se retrouvent surtout sous la forme difficilement accessible de mémoires de maîtrise non publiés.

Comme le soulignent les auteurs dans leur introduction, un tel type de liste est essentiel à la remise à jour de nos connaissances sur la flore du Québec. Cette liste vient aussi compléter une autre étude portant sur la végétation du comté de Lévis, de nature phytosociologique celle-là (Doyon, 1975).

La flore du comté est d'abord située dans le cadre géographique et climatique régional. Une brève discussion des divers paramètres physiques précède en effet l'énumération. Il est peut-être regrettable que les auteurs n'aient pas jugé utile de résumer, même succintement, les données phytosociologiques contenues dans Doyon (1975). Bien que redondant, c'eut été apprécié du lecteur ignorant de cette première étude. On y a aussi rapporté les coordonnées des différentes stations mentionnées dans le texte (longitude et latitude), un détail qui s'avérerait utile lors de la cartographie des données.

La liste annotée, qui comporte 937 entités taxonomiques, suit en général Fernald (1950). Sous chaque taxon, on retrouve un bref commentaire écologique, suivi d'une liste des stations où il a été relevé. Lorsqu'il y a lieu, une référence suit, parfois commentée. (A cet égard, j'aimerais faire ici une brève remarque. Comme le citent les auteurs (p. 146), Raymond (1950) décrivit la distribution d'Aster tradescanti L. comme atteignant sa limite ouest dans cette région. Or des spécimens examinés à MT et QFA, ainsi que nos propres observations (Semple et Brouillet) ont révélé des récoltes provenant des rapides de la rivière St-François à Drummondville. Les Adirondacks de l'état de New York semblent constituer sa véritable limite occidentale sous nos latitudes.) Un aspect positif et stimulant de cette liste est la place qu'y ont faite Doyon et Cayouette aux entités non retrouvées dans le comté de Lévis mais dont l'existence dans les régions avoisinantes est bien établie. On laisse ainsi la porte ouverte à d'éventuelles additions, tout en pointant la direction dans laquelle il faudrait regarder. dille il faudrait regarder.

Enfin, une synthèse intéressante clôture le tout. On y discute de mauvaises herbes, un sujet important dans une région agricole, ainsi que des divers aspects floristiques de la région. Ces données viennent donc compléter l'ouvrage de C. Rousseau (1974). De plus, les auteurs soulignent l'intérêt scientifique de plusieurs espèces qui mériteraient une protection spéciale dans le comté de Lévis. La carte de la page couverture en montre d'ailleurs la répartition.

C'est donc un travail floristique modèle que nous présentent ces chercheurs. En effet, associés à la liste annotée, nous retrouvons une bibliographie complète ainsi qu'un index qui permet de se référer aisément à l'ouvrage. Espérons que de telles publications se feront plus fréquentes, et couvriront éventuellement les invasculaires, (e.g. Bryophytes). Avec l'analyse écodynamique de Doyon (1975), elle

représente un élément indispensable à la conservation de la nature à une échelle régionale. Espérons que les planificateurs sauront en intégrer l'information dans les projets de développement du comté. Souhaitons aussi que cela ravivera l'intérêt du public pour la préservation des ressources. Une abondante diffusion d'un tel document est certainement un pas dans la bonne direction.

Luc Brouillet

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NOMINATIONS FOR THE BOARD OF DIRECTORS

A Call for nominations for the Board of Directors of CBA/ABC for 1980-81 was published in the October issue of the Bulletin.

Incorporation of the association was completed on November 15, 1979 and the Nominating Committee wishes to remind members that nominations are required for the following members of the Board of Directors:

1. President-elect (1 year)
2. Secretary (2 years)
3. 3 Directors (2 years)

The continuing directors will be:
Dr. André Bouchard (Montreal 1979-81)
Dr. Paul Maycock (Toronto 1979-81)
Dr. J. Stanley Rowe (Saskatoon 1979-81)

The retiring directors will be:
Dr. Keith E. Denford (Edmonton 1978-80)
Dr. Jack R. Maze (Vancouver 1978-80)
Dr. Iain Taylor (Vancouver 1978-80)

Of the six (6) directors at least two (2) shall reside west and two (2) east of the Ontario-Manitoba provincial boundary. Accordingly at least one of the incoming directors should be from the west.

Les membres sont invitées retourner chaque mise en nomination au secrétaire pour le 15 fevrier 1980. Toute nomination doit être accompagnes du consentement écrit de la personne nommée, laquelle doit être membre régulier en règle. Chaque mise en nomination doit porter la signature d'au moins trois membres en règale.

The Nominating Committee will continue to accept nominations until February 15th 1980. These should be signed by three members and accompanied by the written consent of the nominee.

Please respond to this call for directors for your association.

Send your nominations to the Secretary:

Dr. David Cass
Dept. of Botany
University of Alberta
Edmonton, Alberta T6G 2E9

Jennifer M. Shay
Chairman
Nominating Committee

POSITIONS AVAILABLE

University of Waterloo - Quaternary Ecologist

Applications are invited for the position of Assistant Professor in Biology. Ph.D. required. Duties include teaching at undergraduate and graduate levels and developing a program of research in quaternary ecology, with emphasis on palynology. Salary minimum for 1979-1980 is $18,400 (Assistant Professor). Send applications (including the names of 3 referees) to Dr. J.K. Morton, Chairman, Department of Biology, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1 before April 30, 1980. The appointment is for a 2-year definite term, subject to the availability of funds.

The University of Victoria, Department of Biology. Applications are invited for a continuing faculty position in the Department of Biology effective 1 July 1980. The primary teaching area will be in Plant Taxonomy and the appointee will be expected to contribute significantly to teaching Introductory Biology and Metaphya courses. Qualifications are a Ph.D. with research experience in vascular plant taxonomy. The appointment will be made at the assistant professor level, at a starting salary of not less than $19,350, dependent upon teaching and research experience. The University has a herbarium of 20,000 specimens, primarily representing the flora of Vancouver Island. The nearby Provincial Museum Herbarium contains 80,000 specimens. The location of the University offers considerable potential for research in Plant Taxonomy.

Applications should include a complete up-to-date curriculum vitae with transcripts, descriptions of teaching and research interests and experience, a list of publications, samples of published papers and the names of three persons from whom letters of reference can be obtained. Submit applications to: Dr. J.N. Owens, Chairman Selection Committee, Department of Biology, University of Victoria, Victoria, British Columbia, V8W 2Y2. Applications should be received by 31 January 1980. Late applications will also be considered.

The Bulletin of the Canadian Botanical Assoc.
Editor:- Dr. J.K. Morton
Department of Biology
University of Waterloo
WATERLOO, Ontario N2L 3G1

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

Enquiries about membership of the CBA/ABC should be addressed to the Secretary of the Association Dr. D.D. Cass, Department of Botany, University of Alberta, EDMONTON, AB. T6G 2E9