

# BULLETIN

L'ASSOCIATION BOTANIQUE DU CANADA



January 1974

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Waterloo

## CURRENT ACTIVITIES OF THE C.B.C./A.B.C.

It is traditional for the President to present a report on the activities of the Executive Committee in the January edition of the Bulletin and there are a number of items that should be brought to your attention.

### Nominations for the N.R.C. Grant Selection

#### Committees:

The Biological Council of Canada has requested the Canadian Botanical Association to make nominations to the appropriate grant selection committees of the National Research Council. Each section was canvassed for nominations and we received 1 nomination for the Cell Biology committee, 4 nominations for the Plant Biology Committee and 6 nominations for the Population Biology Committee. The Executive ranked the nominations and have forwarded the following names as our first choices for each committee: Dr. Kathleen Cole for the Cell Biology Committee; Dr. Taylor Steeves for the Plant Biology Committee and Drs. Hugh Dale and Pierre Morisset (tied) for the Population Biology Committee.

We will be asked to make nominations to these committees each year and at its recent meeting the Executive Committee passed a motion to have the Nominating Committee look after this matter in the future.

### The Montreal Botanical Garden:

Immediately after the Annual meeting in June, a telegram was sent to the Honorable Victor Goldbloom, Minister of the Environment, Province of Quebec, in which the C.B.A./A.B.C. expressed concern that the Montreal Botanical Garden might be taken over by the International Olympic Committee for the 1976 Olympics. It was understood that such action could lead to the permanent closure of the Garden.

Dr. Goldbloom replied by letter on September 11. Although his letter was a long one the final sentence tells us that the Montreal Botanical Garden will be preserved ("Incidentement, meme si le sort du parc Viau demeure incertain, nous avons reussi a preserver le Jardin botanique et probablement aussi les arbres le long de la rue Sherbrooke").

### History of the C.B.A./A.B.C.:

Last March, our former president Dr. Ron Eydt wrote a brief history of the C.B.A./A.B.C. His draft was considered at the meeting of the Executive Committee on June 7 when several changes and additions were suggested. Dr. Chris Marchant circulated the Executive Committee for further suggestions and a revised draft was agreed on at the October executive meeting.

This history will appear in a forthcoming issue of the Bulletin.

### Flora North America:

Our resolution of concern about the demise of the F.N.A. program was sent to a number of people in both Canada and the U.S.A. The only response to these letters was an acknowledgment on behalf of Dr. W. G. Schneider, President of the National Research Council.

### Publication of the Symposia from the 1973 Annual Meeting:

In June the Executive Committee asked Dr. David Wilson, Program Chairman for the Annual Meeting to collect the papers presented in the three symposia and to investigate the possibilities of publishing these papers plus the discussion which followed the main symposium.

By the time of the October Executive meeting Dr. Wilson had received most of the papers and had arranged for most of the discussion to be transcribed. As soon as this work is complete he will begin discussions with possible publishers.

### Further Details from the Executive Committee Meeting of October 27:

Our treasurer Dr. Gary Hicks reported that the total membership stands at 443. During the past five months we have enrolled 32 new members (9 students, 23 regular). The C.B.A./A.B.C. has been asked to consider setting a life membership fee and Dr. Hicks has agreed to look into this matter. He would appreciate comments and suggestions especially from people who have previous experience with life memberships in other organizations.

Dr. John Morton gave an encouraging report on the C.B.A./A.B.C. Bulletin. He would like to receive more copy from the membership as a whole, particularly personal details such as promotions, illnesses, moves, etc. Also details of changes in program, openings of new facilities and other items of interest from departments, institutes, etc., would be welcomed. Names of recent graduates from M.Sc. and Ph.D. programs would be particularly useful; also details of their new positions.

Dr. C. Richard, Dept. D'Agrobiologie, Faculté D'Agriculture, Univ. Laval, Quebec 10, P.Q., has offered to compile a list of graduate student projects for publication in the Bulletin. A more detailed note on this project will appear in the Bulletin but if your department has a current list of projects please arrange to forward it to Dr. Richard.

The Executive Committee passed a motion creating the position of Archivist for the C.B.A./A.B.C. The archivist will assemble correspondence, reports, submissions and other data from the files of current and past officers of the Association and will also be responsible for the back plates of the Bulletin. Several people have been suggested for this position but an appointment has not been made as yet.

Several of our members have enquired about the possibilities of the C.B.A./A.B.C. making group travel arrangements for the trip to Leningrad in 1975 for the International Botanical Congress. We are looking into this matter and hope to have a decision in the near future.

Plans for our 1974 meeting with the American and Mexican botanists are well advanced and are described elsewhere in this issue. Dr. Taylor Steeves reported on the 1975 meeting in Saskatoon where we will meet jointly with the Entomological Society of Canada and the Canadian Phytopathological Society. A joint local committee and a program committee, each representing the three participating societies have been set up. The Executive Committee has begun to make arrangements for the 1976 and 1977 meetings. We have had discussions with several other Canadian Biological Societies about the possibilities of joint meetings and we have had several offers of sites for these meetings. No decisions have been made as yet.

Our former treasurer, Dr. G.A. Mulligan has agreed to organize a membership drive for the C.B.A./A.B.C. He will be assisted by our national directors.

In this issue you are requested to make nominations for the Lawson Medal for 1974. This year we are desirous of obtaining a number of excellent nominations since it will be particularly appropriate to honour outstanding Canadian Botanists at a joint meeting with other North American Botanists. Please consider nominating or supporting the nomination of internationally recognized scientists.

Paul B. Cavers

#### THE GEORGE LAWSON MEDAL

##### Please Read the Following Information Carefully

Each year the C.B.A./A.B.C. 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 and appropriate documentation including biographical information, list of publications and letters by others who support the nomination. Nominations should be sent to me as Chairman of the Awards Committee by February 15, 1974.

Paul B. Cavers  
Department of Plant Sciences  
University of Western Ontario  
London, Ontario

PLEASE CONSIDER NOMINATING COLLEAGUES WHOM YOU  
CONSIDER TO BE WORTHY OF RECOGNITION.

#### THE 9TH ANNUAL MEETING IN TEMPE ARIZONA - CALL FOR PAPERS

The 9th annual meeting of C.B.A./A.B.C. will be held next summer in the very different venue of Arizona. The joint meeting will take place in June 1974 at Arizona State University in Tempe during the A.I.B.S. meeting.

Several members are already working on the organization of this meeting, notably our president Paul B. Cavers, R.A. Shoemaker of the mycology section and G. Barker of the general section. They sponsor respectively the following joint symposia with the Botanical Society of America, the Mycological Society of America and the Ecological Society of America.

1. Symposium on wide-ranging species.
2. Symposium on co-evolution of micro-organisms and higher plants. This will be presented in the honour of D.B.O. Savile who will retire next year.
3. Symposium on the teaching of botany.  
Teaching with fungi.

We still hope to present a fourth symposium with the participation of Mexicans but apparently, active ethnobotanists are inaccessible travellers.

All members should by now have received a copy of the call for papers and the form on which to present the abstract. Abstract forms should be returned in duplicate to the secretary of your section before February 1st 1974. More forms are available from the sectional secretaries or myself (See October Bulletin for addresses).

Field trips are being organized under the direction of J. Canright in Tempe and will be advertised in the next issue of the bulletin.

J. A. Fortin  
Program chairman

#### RARE AND ENDANGERED SPECIES IN THE CANADIAN FLORA

The CBA/ABC through its Systematics and Phytogeography section, established at the June 1973 meetings in London, Ontario, a committee on Rare and Endangered Species in the Canadian Flora. The purpose of this committee is to organize the collection of information on rare, endangered or

extinct plants in our flora. At present information on such plants is scanty, widely scattered and very incomplete. It is hoped that the documentation of this information will enable botanists to have a more objective input into the efforts for conservation, and so assist in countering the ever increasing number of threats to our flora. The cooperation of all botanists and naturalists, both amateur and professional, who have an interest in and knowledge of our flora, is earnestly requested.

We require information on any taxon, species or below, whose present or future survival is threatened to any degree in any region of Canada. If you have any such information please send it to Dr. J.K. Morton, or to any member of the committee. The information we require for each species (or variety, form etc.) includes a) an indication of its present status i.e., is it already extinct, in immediate danger of extinction, just rare but under no immediate threat, or more widespread and abundant but becoming depleted, b) whether this information refers to a local population(s) or to a major part of the range of the plant, c) the causes of the threat to the plant e.g., hydro dam, commercial development, forestry etc., d) the type of habitat in which the plant grows. Also if there is any relevant mention of the plant in the literature we would like references to this. It is important that the information we receive should be as full and precise as possible. A mere statement that a species is endangered in a particular locality without information on why it is endangered, or whether other populations exist in the region, and in what type of habitat it grows, is of very little value. For those who prefer to supply this information on a standardized form, the committee has such forms available and they will be sent on request to Dr. Morton at the address given below. Please indicate how many forms you require (one per taxon). The important thing is PLEASE rally round and support this project. Send us all the relevant information you have. It is hoped that we shall eventually be able to publish a report on the present status of the Canadian flora. Interim reports will appear from time to time in the Bulletin.

The membership of the Committee is: -  
Dr. G.W. Argus, Museum of Natural Sciences,  
Botany Division, Ottawa, Ontario K1A 0M8.

Mr. P. Catling, Dept. Botany, University of  
Toronto, Toronto 181, Ontario.

Mr. A. Legault, Département de Biologie, Faculté  
des Sciences, Université de Sherbrooke,  
Sherbrooke, Quebec.

Dr. C. Marchant, Botanical Gardens, University of  
British Columbia, Vancouver 8, B.C.

Dr. J. K. Morton, Dept. of Biology, University of  
Waterloo, Waterloo, Ontario, N2L 3G1.

#### B.C.C.

The Biological Council of Canada met in Ottawa on Wednesday, October 24th and on Thursday morning October 25th. They met with members of the NRC Advisory Committee on Biology. At the BCC's meeting, the following items were discussed:

#### 1. The BCC-CFBS Merger

Because there are these two large organizations representing Biologists in Canada, BCC at its meeting last March established a Committee to meet with a Committee from CFBS to discuss the formation of a one "umbrella" Biological organization for Canada. The Committee from BCC met with the Executive Committee of CFBS and they agreed not to make any movement towards the establishment of a new umbrella organization. The major objection seems to be that the purpose of CFBS is to arrange meetings whereas the main object of BCC is to review and comment upon Science policy. CFBS, however, has set up a Policy Committee and this Committee will now sit with the BCC whenever it meets. The BCC still hopes that in the near future the objectives of these two organizations can be welded and that one umbrella organization will be able to: a) arrange meetings, and b) speak on Science policies for all Biologists.

2. The President reported that Mr. Davis, the Minister of the Environment, in reply to a letter from BCC, informed us that a study of the lower St. Lawrence from the Ontario/Quebec border to the mouth of the Saguenay River is now under way.

#### 3. IUBS

Dr. Welsh explained the function of the International Union of Biological Sciences at some length and informed us that Canada is represented by NRC. The Canadian Committee is established by NRC and consists of 7 people.

#### 4. NRC Grant Selection Committee.

The BCC sends two delegates to the NRC Advisory Committee and any organization such as CBA/ABC may submit names to NRC for any of the four Biological Grant Selection Committees through the Secretary of the BCC. These names must be submitted by January 15, 1974.

#### 5. SCITEC

Dr. Virginia Douglas, the President of SCITEC attended the BCC meeting and discussed SCITEC as a political agent and that SCITEC has proposed to the Federal Government that it establishes a House of Science and Technology (HOST). HOST would be equivalent then to Sports Canada and all organizations of considerable size would have permanent secretarial space available in HOST.

#### 6. Minister of State for Science and Technology

The Minister, Mme. Sauvé gave an address to the BCC and the CFBS and members of the NRC Advisory Committee on Biology at a dinner Wednesday evening. The title of her address was "Basic Research and National Science Policies". She made reference to volumes 2 and 3 of the Lamontagne Commission, and also to the Science Councils studies in Biology.

#### 7. BCC meeting with NRC Advisory Committee on Biology

Two papers were presented to the assembled Biologists. One was by Dr. Roy L. Taylor, President of the Biological Council of Canada, entitled "Some Considerations Towards the Development of Priorities in Biological Research in Canada", and the second paper was presented by Dr. B.B. Migicovsky, who is the Director General of the Research Branch, Canada Department of Agriculture. After both of these speeches considerable discussion took place between all members who attended. Dr. Migicovsky stated that if Biologists wanted a House they should pay for it. The Federal Government did not provide a House or accommodation for the Steel

Workers Union. Why should they pay for a House for the Biologists Union or any other Scientists Union.

In summation I would say that the President and the two delegates from CBA/ABC who spent this day and a half in Ottawa were well rewarded for the time spent and we all had opportunities to contribute our comments from the Ministerial level down on Science policy in Canada.

H. R. N. Eydt.

NOTE: Dr. Eydt has agreed to a request from our Executive Committee to represent the CBA/ABC for a further 2 years on BCC.

#### A BOTANICAL CONTEST

One of the more curious aspects of our cultivated plants concerns the actual determination of the oldest, continuously propagated genotype. If you haven't thought about this problem it can be a most challenging one. Do you have any candidates which you think might vie for the longest, continuously cultivated plant? Two suggestions which we have had are some of the household geraniums and the culinary herb, horseradish. Along with your entry could you provide information as to the present state of the reproductive system and level of ploidy. Please send all entries to this contest to The Botanical Garden, The University of British Columbia, Vancouver, B.C. V6T 1W5

THE AMERICAN HORTICULTURAL SOCIETY, PLANT RECORDS CENTRE is pleased to announce the availability of a new service to professional horticultural organizations. Utilizing its modern, computerized data files, where more than 200,000 records are maintained representing living plants cultivated within major North American botanic gardens, parks and arboreta, the Plant Records Center is capable of researching its files for information relating to plants cultivated within North America. Generally, if available, the basic information sought regarding any desired taxon - collection(s) where grown, date of acquisition, and original sources(s) - can be provided for the minimum service fee of \$10.

Though it cannot imply that plants or plant materials may be obtained from these collections, the Plant Records Center can serve to direct professionals to desired living plants. Never before has there been one place for professional horticulturists to refer to in order to locate specific plants.

Additional information regarding this service, estimates for or answers to specific requests will be supplied promptly upon request. Address inquiries to Richard A. Brown, Director, American Horticultural Society, Mount Vernon, Virginia 22121.

#### THE FEDERATION OF ONTARIO NATURALISTS

Amongst resolutions approved at the 1973 F.O.N. annual meetings were the following which may be of interest to our membership:

To the Government of Ontario:

The Floral Emblem Act of 1937 designated the White Trillium (*Trillium grandiflorum*) as the floral emblem of Ontario. We urge that the Floral Emblem Act of 1937 be amended to provide legislative protection for this plant.

To the Government of Canada:

In view of the vulnerability of land and wildlife north of 60°, and of the fragmentary nature of baseline ecological data on the subarctic, the Beaufort Sea, and the arctic archipelago, and in view of current precipitate governmental and industrial activities in the north, the Federation of Ontario Naturalists urges a national public inquiry into northern issues, of sufficient scope and duration to provide Canadians with the necessary background for a more informed decision-making progress. Such an inquiry must be conducted at the parliamentary level, since it will transcend both the mandates and the procedures of the Department of Indian Affairs and Northern Development and the National Energy Board. Only total disclosure for public evaluation of information relating to the north can produce reliable decisions on such fundamental matters as Canadian energy, resource and economic policies, environmental concerns, alternative modes of fossil fuel development and transport, timing of such development, and related questions. The results of a national public inquiry could form the basis for assessment of any future northern development proposals.

#### ATMOSPHERIC VISIBILITY IS DECREASING

In the eastern U.S., scientists associated with the National Oceanic and Atmospheric Administration (NOAA) have found that at three locations studies, occasions of low visibility (six miles or less) have increased from an average of 21.5 percent for the period 1962-65 to an average of 33.1 percent for the period 1966-1969. The averages refer to periodic daily observations made at airports in Akron-Canton, Ohio; Lexington, Kentucky; and Memphis, Tennessee. Removal of factors of location and weather differences from the calculations did not significantly affect the trend of decreasing visibility. A NOAA news release (February) states that the increases in atmospheric haziness, or restricted visibilities must be a result of either natural or man-induced causes. Since no known natural additions to the atmosphere occurred during the period concerned, the NOAA scientists concluded that particulate pollution must be the cause of decreasing visibility.

(From Environment, April 1972)

#### PERSONALIA

Paul R. Gorham, Dept. of Botany, U. of Alberta, has recently been appointed to a 5-year term, starting 1st October 1973, on the editorial board of Plant Physiology, The Journal of the American Society of Plant Physiologists.

Dr. Gorham was also the invited speaker at the official opening of the C.W. Argue Research Wing of the Loring W. Bailey Biology Building of the University of New Brunswick. At the ensuing Convocation he was honoured by the award of the degree of Doctor of Science in recognition of his contributions to national and international botany in the fields of Phycology and Plant Physiology.

Dr. Gorham was an honours graduate of the University of New Brunswick in Biology and Chemistry in 1938.

## GRADUATE STUDIES IN BOTANY AT CANADIAN UNIVERSITIES - ADDENDUM

McGill University, Montreal, Quebec  
Department of Biology, 11 botanists  
Degrees offered: M.Sc., Ph.D.

A.N. Auclair, Assistant Professor, B.Sc., Ph.D.  
Mathematical and ecosystem ecology

W.G. Boll, B.Sc., Ph.D.

Plant growth and morphogenesis; cell and organ culture; tryptophan synthase and other enzymes in plant development; control of storage protein synthesis in developing seeds; phospholipid biosynthesis in cell development.

S. P. Gibbs, A.B., M.S., Ph.D.

Cell biology, chloroplast ultrastructure and anatomy.

M.E. Goldstein, A.B., Ph.D.

Phycology, mariculture of seaweed resources

G.A. MacLachlan, B.A., M.A., Ph.D.

Plant biochemistry; hormones and enzyme turnover

K. Maier, Ph.D.

Botanical histochemistry; ultrastructure of plant cell wall.

W. C. Oechel, A.B., Ph.D.

Physiological plant ecology; analysis of photosynthesis and respiration in relationship to environmental parameters and tissue water potential; primary production and energy utilization in natural ecosystems; acclimation and ecotypic differentiation.

R.J. Poole, B.Sc., Ph.D.

Membrane transport; roles of the plasmalemma and tonoplast of plant cells.

R. D. Sattler, Ph.D.

Developmental and theoretical plant morphology; floral development; concepts of homology; philosophical foundations of biology, particularly comparative morphology.

H. Tyson, B.Sc., Ph.D.

Biochemical and population genetics in high plants.

C.M. Wilson, B.Sc., M.A., Ph.D.

Cytology and life cycles of the lower fungi.

### THE AMERICAN SOCIETY OF PLANT TAXONOMISTS (ASPT)

announces formation of a new Section for American Systematic Collections (SASC). The purpose of the SASC is to provide a forum and mechanism for consideration of problems of support, development, safety, and exploitation of the botanical collections resources upon which the science of plant taxonomy and its ancillary fields depend.

Membership in the SASC is open to all without charge. You do not need to be a member of the ASPT to join, although there are advantages to this affiliation, such as expected publication of items of general interest to the Section in *Brittonia*, the official organ of ASPT.

If you have a stake in the future of collections and collections-related resources, if you want to have a say in developing better support for and recognition of the problems of collections, if you wish to have the ready

support of your colleagues for problems of your own, please join in the work of this Section. Send your address to: Dr. Willard W. Payne, Chairman of the Executive Board, ASPT-Section for American Systematic Collections, Department of Botany, University of Illinois, Urbana, Ill. 61801.

### POSITIONS AVAILABLE

Applications are invited for two positions in the Department of Biology, Wilfrid Laurier University (formerly Waterloo Lutheran University).

Preference will be given to candidates with demonstrated teaching ability in undergraduate biology. 1. Associate or full professor preferably to teach ecology but other fields of specialization will be considered. Duties involve undergraduate teaching with the possibility of serving as departmental chairman for a 3-year term. The stipend will be consistent with rank and qualifications. 2. Assistant or associate professor qualified to teach plant physiology and/or other botanical subjects in an honors undergraduate program.

Applications including curriculum vitae, names of three referees and reprints of published research should be sent to Dr. A. A. Wellwood, Chairman of Selection Committee, Department of Biology, Wilfrid Laurier University, Waterloo, Ontario. N2L 3C5. Closing date for applications - March 1, 1974.

AN INTERNATIONAL SYMPOSIUM ON HAPLOIDS IN HIGHER PLANTS June 10-14, 1974, University of Guelph, Guelph, Canada. The symposium, endorsed by the International Genetics Federation, will deal with various methods of producing haploids in higher plants and their utilization in research and plant breeding. Topics will be History and Scope of Haploids, Methods of Producing Haploids (2 days), Utilization of Haploids (2 days).

Persons interested in attending this symposium should write to Dr. K. J. Kaska, University of Guelph, Guelph, Ontario, Canada.

### VIIIth PLENARY MEETING OF AETFAT

The VIIIth Plenary meeting of the Association pour l'Etude Taxonomique de la Flore d'Afrique Tropicale will be held in Geneva from the 16th to the 21st of September 1974.

The main theme will be: "The origin of the floras of Africa and Madagascar and the type of speciation".

Further information can be obtained from: Secrétariat Conservatoire et Jardin Botaniques de la Ville de Genève 192, route de Lausanne, CH-1202 Genève, Suisse.

### PHLOEM TRANSPORT CONFERENCE

An Advanced Study Institute on Phloem Transport will be held in Banff, Alberta, Canada during 18-29 August, 1974. This Conference will be concerned with the anatomy, physiology, and biophysics of organic solute transport in phloem. The lecturers, all of whom are internationally-recognized authorities in this field, will provide current information in their respective areas and seek especially to evaluate current theories in the light of known information.

The Program will consist of morning and evening lectures and discussions, with free afternoons. The Conference site is The Banff Institute of Fine Arts, and will accommodate approximately 100 persons. The Conference is supported primarily by a grant from N.A.T.O., but additional funds are currently being sought from other agencies, as the National Research Council (Canada) and the National Science Foundation (U.S.A.).

Invitations to participate in this Conference are invited from scholars and advanced students in this discipline. Some support may be anticipated, but the bulk of the resources will have to be supplied by the applicant. The cost of accommodations and meals at the Conference for the entire period will be \$200.00 (double occupancy).

All applications should include institutional affiliation (at the time of the Conference), focus of interest in phloem transport, and a list of pertinent publications in this area. Graduate students and post-doctoral fellows should also include the name of their thesis supervisor and the dissertation title. Requests for support must include a rationale.

The Organizing Committee consists of: Professors P. Weatherley (Aberdeen), C. Swanson (Ohio State), J. Dainty (Toronto), P. Gorham (U. Alberta), L. Srivastava (Simon Fraser U.) and S. Aronoff (Simon Fraser U.).

Please send your completed applications to:

Dr. S. Aronoff  
Dean of Science  
Simon Fraser University  
Burnaby V5A 1S6, B.C.  
Canada

Applications must reach the above by no later than 15 March 1974.

Announcements of acceptance will be made on or before April 1974.

## PUBLICATIONS

*Organogenesis of Flowers - A Photographic Text Atlas* by Rolf Sattler. University of Toronto Press, 1973. Price \$27.50

In this volume, the first atlas of floral development compiled in the twentieth century, the flowers of 50 species are seen to develop in a dynamic, three-dimensional manner in a series of photographs obtained by a dissection technique developed by the author. Among the 50 selected species are found the major patterns of floral development and the major orders and families of flowering plants.

The book is profusely illustrated with black and white photographs which, for the most part are clear and well reproduced. The author has deliberately avoided the use of diagrams and presents his thesis in the form of photographs. This is an excellent approach but the use of some diagrams in conjunction with the photographs would, we feel, help to make the work more readily interpretable to the user. However, the descriptive text which accompanies the photographs for each species is of assistance in this respect.

Floral diagrams and floral formulae are presented for each species. The floral diagrams are of excellent quality and accuracy and it is refreshing to find a conventional and widely acceptable type of diagram being used ("the diagram is meant to be empirical not theoretical [interpretive]"). Photographs of mature flowers

also accompany those of organo-genesis. Many of these are of poor quality, showing little detail, and detract from the excellence of the other illustrations.

A short bibliography accompanies the account of each species.

The book is well presented being printed on a high quality paper and is securely bound with a hard cover. It should be a constant and very valuable reference work for students in laboratory classes dealing with floral structure as well as to research workers. Unfortunately the price is likely to place it beyond the reach of most students and relegate it to the shelves of the major libraries and research laboratories.

J. K. Morton

## TWO NEW WORKS ON THE CANADIAN FLORA/Deux Oeuvres Sur La Flora du Canada

Catalogue analytique des espèces végétales du Québec arctique et subarctique et quelques autres régions du Canada/Analytic catalogue of plant species from the arctic and subarctic of Quebec and other regions of Canada by Gardner, G. 1973. Montréal, Québec. ca. 575 pp.

Peatland flora of Newfoundland. Robertson, A.W., F.C. Pollett & O.A. Olsen. 1973. Canada Dept. of the Environment, Forestry Service. Nfld Forest Res. Centre, St. John's. Information Rept N-X-93. 442 pp.

The above two recent works will be of interest to Canadian botanists. Both are basically floristic works and contain a great amount of information on all groups of plants and their occurrences in northern or eastern Canada.

Gardner's large volume includes detailed lists of specimens collected by him in 86 localities (all of which are precisely indicated and mapped) of northern Canada (mainly centred on the Quebec-Labrador Peninsula), 48 plates of photographs, and general comments on the vegetation and phytogeography of the main areas investigated. Dr. Gardner has been studying plants in northern Canada for several decades (specimens cited span the years 1930-1970!), and the present work brings the unpublished parts of his studies into print. The work is fully bilingual, which adds to the bulk but also to the work's usefulness. Although mainly concerned with vascular plants, there are extensive data on over 100 lichen species, some 60 bryophytes, and an extensive list (some 250 species) of freshwater and marine algae.

The work by Robertson *et al.*, although quite different in approach and more limited in geographical scope, also contains a great deal of information that was not previously available. It is a flora of the 205 most important species occurring on peatlands in Newfoundland (including 136 vascular plants, 46 bryophytes, 22 lichens, and 1 *Chara*), and gives the following for each species: complete description, ecological notes (data refers only to peatlands), distribution map (also valid only for the species' occurrences in Newfoundland peatlands), and an original illustration (fullpage). It is also a massive work, and one that represents several years of study of peatlands throughout Newfoundland.

Ces deux publications récentes contiennent beaucoup de données précises sur les plantes du nord et de l'est du Canada. Celle de Gardner

(complètement bilingue) se rapporte à la floristique et la biogéographie de plusieurs endroits nordiques, surtout dans la péninsule Québec-Labrador. De nombreux spécimens de plantes vasculaires, lichens, bryophytes, et algues sont cités, et les localités sont citées de façon très précise. L'oeuvre de Robertson, Pollett et Olsen, une flore des tourbières de Terre-Neuve, traite 205 des espèces les plus importantes de ces endroits (plantes vasculaires, bryophytes, lichens, *Chara*). On trouve pour chaque espèce: une description, notes sur son écologie dans les tourbières, une carte de distribution dans les tourbières, et une illustration.

Guy R. Brassard.

Insect/Plant Relationships: Symposium of the Royal Entomological Society, number six. Pp. 3-231. Blackwell Scientific Publications, 1973. Price: £6.50. Edited by Dr. van Emden.

This is an extremely useful book. The subjects covered are all topics which otherwise only appear in scattered papers in a wide range of journals. Here they are brought together, each with a good bibliography. The book starts with Professor Southwood's evolutionary perspective on Insect/Plant relationships, which he neatly summarises. The heading "The variety of the subject" deals with both the botanical and insect aspects of the problem. This is followed by a series of chapters on the plant and insect life-cycles and their inter-relations. The evolution of this relationship, which includes a palaeontological approach so often neglected in entomological writings, covers the ground adequately and finally "Population dynamics" of the insect and the host plant summarise a broad field of inter-relationship. There are 16 authors to the chapters of this book and there is no doubt that it contains something for most botanists and entomologists.

Abstracted from Entomologist's Gazette Vol.24.

Forest Regions of Canada by J. S. Rowe. Department of the Environment, Canadian Forestry Service Publication No. 1300. 1973. 172 pp. with a map pocket and photographs. \$2.50. Paperback.

Deadly Harvest: A Guide to Common Poisonous Plants by John M. Kingsbury. Holt Paperpack. 1972. 128 pp.

#### *Quaternary Research in Canada 1972*

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Editor

## BIBLIOGRAPHIE DE L. CINQ-MARS 1919-1973

compilé par B. Boivin

La bibliographie ci-dessous est presque entièrement basée sur une liste préparée par Cinq-Mars lui-même en 1970, révisée quelque mois avant son décès.

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