THE CANADIAN BOTANICAL ASSOCIATION

BULLETIN

L'ASSOCIATION BOTANIQUE DU CANADA

ISSN 0008-3046

July 1983 Volume 16 Number 3 Vancouver

CBA/ABC — AS WE APPROACH TWENTY YEARS

February 11, 1984, is the 20th anniversary of the first meeting of botanists that led to the formation of the Canadian Botanical Association. The first stage in the planning of this meeting was in June 1963, when the Plant Biology Subject Division of the Royal Society of Canada approved a recommendation for the formation of a Canadian botanical society. Hence, the genesis of the CBA/ABC was between 1963 and 1964, with the Founding Meeting being held in May 1965.

Twenty years is a relatively short time to some — but it may be chastening to remember what you were doing then, and how much time has passed. I was a carefree undergraduate at Liverpool University, enjoying the Beatles and concerned only with passing genetics and taxonomy courses. Many of the founders of the Association are now retired, or dead. Therefore, it seems appropriate to print a review of the last twenty years. The bulk of this article is an almost verbatim reprint of one written by Roy L. Taylor and published in the CBA/ABC *Bulletin*, Volume 2, Number 2 (April 1969). Roy is one of the founding members who is still active in the Association, and his description is the earliest review of those days. The remaining material was gleaned from back copies of the *Bulletin* and from recollections of various individuals.

CBA/ABC — A REVIEW

Founded in May 1965, the Canadian Botanical Association/L'Association Botanique du Canada is one of the more recent biological societies in Canada. The development of the Association dates to June 1963 when Section III, Plant Biology Subject Division, of the Royal Society of Canada endorsed a report of the Special Committee on Role of Plant Sciences in Canadian Scientific Endeavor. This report recommended the formation of a Canadian botanical society. The recommendation was based on widespread agreement in Canada that a society or affiliation of societies was needed to promote and represent the interests of Canadian botany.

A meeting was convened by R.A. Ludwig (Director, Plant Research Institute, Canada Department of Agriculture) following discussion with P.R. Gorham (National Research Council of Canada), convenor of Section III of the Royal Society of Canada. Fifteen botanists in the Ottawa area met on February 11, 1964, and adopted a plan to create a botanical organization for those disciplines that were without a Canadian society. The first step in this plan was implemented on March 9, when the Royal Society of Canada sponsored a meeting of 35 representative Canadian botanists to discuss the initiation of the botanical society. Unanimous approval was given to the formation of a botanical organization. A provisional committee (Appendix I) was appointed and charged as follows:

1) To nominate an Advisory Committee for consideration and, if approved, present for ratification at the next organizational meeting to be held June 3 at the annual meeting of the Canadian Society of Plant Physiologists;
2) To arrange for a program at the meeting with papers to be presented by representatives of the major areas of botany on the needs of the new organization;
3) To suggest a suitable name for consideration at the June meeting;

4) To canvass potential members for an expression of support;
5) To provide two representatives at a meeting sponsored by the Canadian Society of Plant Physiologists to be held in Ottawa, March 23, to consider the formation of the Canadian Biological Council.

From March 9 to June 3, the Provisional Committee made preliminary arrangements for a founding meeting. At the same time, a program was developed, a provisional list of over 400 botanists was produced, and a draft constitution prepared.

The June meeting represented the first time in over 100 years that the general botanical fraternity of Canada met as a group. Sixty-eight botanists from 29 institutions and 7 provinces attended. B.N. Smallman, Chairman, Department of Biology, Queen's University, welcomed the group. He indicated that it was particularly appropriate for discussions of a such an association to take at Queen's as this was the site of the short-lived Canadian Botanical Society founded through the impetus of Professor George Lawson. The work of the Provisional Committee was presented and Chairman R.A. Ludwig gave the following statement regarding the need for a botanical organization:

> "The need for an interest in an organization of botanists is greater now than it has been at any time in the past. Canadian botanists were formerly to be found in a relatively few institutions. There are now botanists in almost all of the many universities that have sprung up over the last ten years. This complicates the kind of communication that is so essential to the development of a vigorous science. We need a means of exchanging scientific ideas and of presenting a united voice on matters of common concern. It is the responsibility of botanists to see that their science is developed vigorously and in the best interests of the nation. This can only be done if we create public interest and confidence, encourage support of research and take an interest in our students — in short if we shoulder our full professional responsibilities. The key obviously lies in a strong national organization."

After a discussion of the role of subject areas in the new organization and a draft of the constitution, the meeting approved in principle the formation of a Canadian Botanical Organization. A provisional membership fee was set at $2 for 1964. The invitation from Carleton University was accepted for the founding meeting in 1965. An Organization Committee was approved (see Appendix II).

In the period from June 1964 to May 1965 a program committee was struck, a roster of Canadian Botanists was published, and the constitution redrafted. Much effort was directed toward providing information on the development of the society to botanists.

The Founding Meeting of the Canadian Botanical Association/L'Association Botanique du Canada was held at Carleton University, Ottawa, May 26-28, 1965. The National Research Council subsidized travel for some of the 179 delegates. The program included 4 field trips; an informal evening; a colloquium entitled "The Evolution of Canada's Flora"; a banquet addressed by Jacques Rousseau; and a business meeting. Papers presented in the colloquium plus the "Personal Recollections of Frère Marie-Victorin" by Marcel Raymond were later published as a book commemorating the Founding by the University of Toronto Press (The Evolution of Canada's Flora, edited by Roy L. Taylor and R.A. Ludwig, 1966). The first Executive Committee was elected with R.A. Ludwig as President (see Appendix III). Six preliminary sections relating to different botanical disciplines met, chairmen appointed (see Appendix IV) and program plans made. The organization envisaged two years earlier was a reality.

The second Annual Meeting took place in Vancouver, again with Dr. Ludwig in the chair. These first two meetings established the CBA/ABC Annual Meeting tradition of arranging the sessions around field trips. The pattern of the meetings, too, was set. Thus, the annual meeting provides for the Annual Business Meetings of both the Association and the individual sections, as well as an opportunity to present papers, attend special symposia, and go on the field trips. The establishment of awards over the last 16 years allows the Association to honour Canadian botanists for outstanding contributions to our science. Each year, the Local Organizing Committee has arranged at least one symposium of interest to all members. Symposia of mutual interest have been arranged when the CBA/ABC has met jointly with other societies.

The Annual Meetings, sometimes alone and sometimes with other societies, have taken place at universities across the country, and in the United States. The two largest meetings organized by CBA/ABC, with over 1000 delegates each, were when we hosted joint meetings with other American botanical societies — at Edmonton with A.I.B.S. in 1971 and in Vancouver with B.S.A. in 1980. In addition, CBA/ABC has met three times with the American societies in the U.S. — in 1969 at Seattle during the XI International Botanical Congress, 1974 in Tempe with B.S.A., and in 1983 at Grand Forks with A.I.B.S. The basic format of the meetings has remained the same, although poster sessions have now been added to the oral presentations. The table below, showing the site of the annual meeting and the other societies involved, where applicable, indicates the diversity of location.

Year	Site of Meeting	President
1965	Carleton University	R.A. Ludwig
1966	Univ. of British Columbia (with C.S.P.P. & C.P.S.)	R.A. Ludwig
1967	Ottawa University	E. Rouleau
1968	Lakehead University	R.L. Taylor
1969	Univ. of Washington, Seattle (XI I.B.C.)	J.C. Ritchie
1970	Laval Université (C.S.P.P.)	H.M. Dale
1971	University of Alberta (A.I.B.S.)	J.R. Stein
1972	Dalhousie University (C.S.P.P.)	H.R.N. Eydt
1973	Univ. of Western Ontario	T.A. Steeves
1974	Univ. of Arizona, Tempe (B.S.A.)	P.B. Cavers
1975	Univ. of Saskatchewan (E.S.C. & C.P.S.)	J.K. Morton
1976	Bishop's University	M.E. Elliott
1977	Univ. of Manitoba (G.S.C. & C.T.I.A.)	W.N. Stewart
1978	Memorial University	P.R. Gorham
1979	Carleton University	J.M. Shay

1980	Univ. of British Columbia (B.S.A.)	N.G. Dengler
1981	Univ. of Guelph	M. Shaw
1982	Univ. of Regina (C.S.P.P.)	J.B. Phipps
1983	Univ. of North Dakota Grand Forks (A.I.B.S.)	J.H. Soper

It is interesting to note that we have returned to a meeting place only twice in 19 years — to Carleton University (1965 and 1979) and the University of British Columbia (1966 and 1980).

The sections within CBA/ABC reflect the specific interests of the members. They now comprise Ecology, General, Mycology, Phycology, Structure & Development, and Systematics & Phytogeography. As with most organizations, the section memberships and activities tend to fluctuate over the years, and the Paleobotany section was disbanded about 1975. The Phycology section was illegally disbanded in 1977, but was resurrected the following year. The newest section, Structure & Development, was established in 1981 from the "catch-all" General Section. This means that 5 of the 6 preliminary sections established at the Founding Meeting have survived to the present day.

The CBA/ABC *Bulletin* was established in 1968, with members encouraged to contribute items and articles of botanical interest. In the first issue (January 1968), Roy Taylor, then President of CBA/ABC, wrote:

> "This CBA-ABC Bulletin has grown out of the need for an effective means of communication. It is our hope that you will be kept well informed of the developments of our Association through this Bulletin, which is under the editorship of Janet R. Stein (University of British Columbia) and the Publication Committee of the Association Directors. Clearly, the Association has provided a means for botanists throughout Canada to become better acquainted with one another and the new Bulletin will continue to further this. Active participation in the Association will undoubtedly lead to richer and better developed programs in Canadian botany."

In addition to contributed articles, the *Bulletin* has always been the vehicle for disseminating Association information to members — advertising and reporting on the Annual Meetings, reports from Sections and sub-committees, and publishing information from botanical institutions and universities (e.g., job opportunities). There have been 4 editors of the *Bulletin* in its 16-year history:- Janet R. Stein (1968-1969), J.F. Alex (1970-April 1971), John K. Morton (July 1971-April 1980), and Sylvia Taylor (July 1980-the present). In addition, Roy L. Taylor served as interim editor for the October 1969 issue. The Publications (later Editorial) Committee, composed of some of the Directors to give help and advice to the Editor, apparently died a natural death about 6 or 7 years ago, and the Editor assumed sole responsibility for the *Bulletin* and its contents. All the editors have depended heavily on members to submit information and articles.

The CBA/ABC has also been responsible for several other publications. Supplements to the *Bulletin* were issued for 1973, 1976, 1977 and 1978 (the actual date of publication did not coincide with those years). These contained the proceedings of symposia held during the Annual Meetings of those years. They were titled The Evolution of Canada's Flora (1973), Natural Areas (1976), Invited Papers (1977) and Keynote Address and Notes on Newfoundland Botanists (1978). In 1980, Index to Canadian Herbaria and CBA/ABC Membership List were issued as supplements, and in 1981 a suuplement, Directory of Canadian Mycologists - 1981, received limited distribution to members of the Mycology Section, subscribing libraries, and to people who specifically requested it. Publication of symposia proceedings as supplements to the *Bulletin* became too expensive after 1979, and papers presented at Carleton University in 1979 and at Botany 80 in Vancouver were published in the Canadian Journal of Botany.

The CBA/ABC presents four awards at its Annual Meeting. The George Lawson Medal, established in 1968, honours Canada's earliest distinguished botanist. This 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". Originally, only one award for cumulative contributions to botany was made each year, but a second award was established in 1970 (first presented in 1971) for a single contribution of merit. This second award is usually presented to the author of a monograph or book on or pertaining to Canadian botany.

The Mary E. Elliott Service Award was established in 1977 to commemorate Mary E. Elliott, President of CBA/ABC in 1975/76, who died tragically in September 1976. This award was first made in 1978, and is for meritorious service by an individual to the Association. Ontario mycologists also organize an annual Mary E. Elliott Mycological Foray.

The Lionel Cinq-Mars Award was established in 1976-77 as the Student Award, and commemorates a well-known Quebec botanist and founding member of CBA/ABC. It was first given in 1977, and is awarded for the best student paper presented at the Annual Meeting (based on the decision of a panel of judges headed by the President-Elect).

The newest award is the Luella K. Weresub Memorial Award established in late 1982 to commemorate the Canadian mycologist who died in 1980. This award will be made each year to the graduate student in mycology at a Canadian university who has published the best paper in the current year, based on both scientific merit and presentation (including use of the language). Judging of the papers will be by a panel of professional mycologists. In addition, the Mycology Section organizes the Luella K. Weresub Memorial Lecture at the Annual Meeting, with the first of these lectures being given in 1981.

The Canadian Botanical Association has always played a strong, active and supportive role within the Biological Council of Canada. The Council is an umbrella organization designed specifically to stimulate and promote biology in Canada. It provides a meeting place for biologists, and has increased communication between members of the biological community with the development of specific programs such as the Canadian Directory of Bioscientists, the brochure on "Why Biology?" for Canadian students (edited by A.N. Langford, a CBA/ABC member), and Special Reports. The CBA/ABC will continue to participate in an active way within the organi-

zation. The first meeting organized by BCC, the Canadian Congress of Botany, will be held at the University of Western Ontario in June 1985.

Since 1965 the CBA/ABC has grown steadily in stature and provides an effective organization for the voice of Botany in National and international affairs. The membership is presently around 400, a number that has remained almost steady since the beginning. In retrospect, one must commend the leading role that the Royal Society of Canada played in providing a stimulus for the initiation of the Association. Many people played an active role in the formative stages, but the imaginative leadership and drive needed to launch the organization was ably given by P.R. Gorham and R.A. Ludwig.

Appendix I: Provisional Committee (March 1964) Chairman, R.A. Ludwig; Secretary, R.L. Taylor; Members, N.W. Radforth, C.J. Hickman, J.R. Beaudry, R.T. Coupland, P.R. Gorham.

Appendix II: Organization Committee (June 1964) Chairman, R.A. Ludwig; Vice-Chairman, E. Rouleau; Secretary, R.L. Taylor; Treasurer, W. J. Cody; Directors, L. Cinq-Mars, R.T. Coupland P.R. Gorham, C.J. Hickman, N.W. Radforth; Provisional Advisory Council: R.F. Scagel, V.J. Krajina, A. Szczawinski, W.G. Ziller, H.J. Brodie, F.L. Staplin, J.C. Ritchie, H.R.N. Eydt, J.H. Soper, R.D. Gibbs, A. Legault, A.N. Langford, R. Cayouette, E.C. Smith, A.R.A. Taylor.

Appendix III: First Executive (June 1965) President, R.A. Ludwig; Vice-President, E. Rouleau; Secretary, R.L. Taylor; Treasurer, W. J. Cody; Directors, L. Cinq-Mars, R.T. Coupland J.C. Ritchie, C.J. Hickman, A.F. Szczawinski, A.R.A. Taylor.

Appendix IV: Provisional Sections (June 1965) Ecology (Chairman, R.A. Coupland); General (Chairman, T.A. Steeves); Mycology (Chairman, J.W. Groves); Paleobotany (Chairman, F.L. Staplin); Phycology (Chairman, A.R.A. Taylor); Systematics (Chairman, J.H. Soper).

Next issue:- The officers of CBA/ABC since 1965 and the Award winners.

ANNUAL MEETING 1983 — FIELD TRIP

Ecological Society of America - Paleoecology Section Field Trip — LAKE ITASCA

This field trip will take place on FRIDAY, AUGUST 12, 1983. Cost — $9.00 bus fare + $4.00 bag lunch + $5.00 evening meal (U.S. $).

The bus will depart from Wilkerson Hall at 7:00 am and return by 12:00 pm (midnight).

This day of show and tell features Allan Ashworth on the history of Lake Agassiz and the beetlefull Early Wisconsinan? Gervais Formation, Jock McAndrews on the history of the prairie-forest transition with up-to-date discussion by Ed Cushing and J. Platt Bradbury on the paleo-limnology of Elk Lake, Itasca Park, complete with a display of newly-pulled Anderson sediment traps. In the evening, we will have a tour of the renowned University of Minnesota's Lake Itasca Forestry and Biological Station.

Reservation and prepayment of transportation cost should be sent by July 1 to J.H. McAndrews, Dept. of Botany, Royal Ontario Museum, 100 Queens Park, Toronto, Ont M5S 2C6, or telephone (416)978-6271.

OFFICERS OF CBA/ABC 1982-1983

President:	Dr. James H. Soper Nat.Mus.Nat.Sci., Ottawa
Past-President:	Dr. James B. Phipps Univ. of Western Ontario
President-Elect:	Dr. George W. Barker Univ. of Guelph
Vice-Presidents:	Dr. J. Stan Rowe Univ. of Saskatchewan
	Dr. Mohan K. Wali Coll.Env.Sci., Syracuse
Secretary:	Dr. Iain E.P. Taylor Univ. of British Columbia
Treasurer:	Dr. Guy R. Brassard Memorial Univ.
Directors:	Dr. Paul M. Catling Biosyst.Res.Inst., Ottawa
	Dr. J. André Fortin Univ. Laval
	Dr. Paul G. Harrison Univ. of British Columbia
	Dr. Kaye L. MacInnes Yellowknife
	Dr. Bruce A. Roberts Can. Forestry Serv., Nfld
	Dr. Vipen K. Sawhney Univ. of Saskatchewan
Editor *Bulletin*: (ex off.)	Mrs. Sylvia Taylor UBC Botanical Garden
Archivist:	Dr. W.I. Illman Carleton Univ.

NEWS FROM THE SECTIONS

Ecology Section

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

General Section

Chairman: Joanne Macdonald, Dept. of Forest Resources, Univ. of New Brunswick, Fredericton, N.B. E3B 6C2

Mycology Section

Chairman: James A. Traquair, Harrow Research Station, Harrow, Ont N0R 1G0

Phycology Section

Chairman: H.C. Duthie, Dept. of Biology, Univ. of Waterloo, Waterloo, Ont N2L 3G1

Structure & Development Section

Chairman: Richard I. Greyson, Dept. of Plant Sciences, Univ. of Western Ontario, London, Ont N6A 5B7

Systematics & Phytogeography Section

Chairman: John McNeill, Dept. of Biology, Univ. of Ottawa, Ottawa, Ont K1N 6N5

NOTE: All Sections will be holding Business Meetings during the Joint CBA/ABC - A.I.B.S. Meetings in Grand Forks, August 7-11, 1983.

CBA/ABC CONSERVATION COMMITTEE

Following is the text of a letter sent to Dr. Dianne Fahselt, Chairman of the CBA's Conservation Committee on February 27, 1983, with a copy to the *Bulletin* Editor.

Dear Dr. Fahselt,

No doubt you and the Conservation Committee are aware that Parks Canada officials are presently negotiating with the Ontario Ministry of Natural Resources to establish a 270 sq.km. national park on the upper Bruce Peninsula, Ontario. As botanists I'm sure that members of the C.B.A. realize, probably better than any other professional group, the value and uniqueness of the Bruce Peninsula's ecosystem. Parks Canada planners have stated that this proposed park area is the best remaining natural example of the West St. Lawrence Lowlands biome.

Of the 32 member organizations of the Conservation Council of Ontario, 31 have endorsed a resolution to the Minister of Natural Resources, supporting the establishment of the proposed Bruce Peninsula national park.

As a member of the Canadian Botanical Association and as a Director of the Wildlands League, I ask you to request the Conservation Committee to give top priority to officially backing the proposed park plan.

Sincerely,

James L. Hodgins

12TH PLANT DEVELOPMENT WORKSHOP

The 12th meeting of the Plant Development Workshop of Ontario botanists was held on April 9th in the Biology Department of McMaster University. The first session was devoted to a mini-symposium on nuclei and chromatin. The guest speaker, Dr. J.P. Mitchell (The Ohio University), gave a paper on "Nuclei and Nucleoli". Other papers and posters in this session dealt with RNA synthesis in binucleate cells, chromosome arrangement in interphase, delayed induction of chromosome breaks by maleic hydrazide, and heat shock proteins of *Zea mays*. The contributors were S.W. Armstrong, E. Pertens, A. Hilliker, D.B. Walden, B. Atkinson, C. Baszczynski and D. Davidson.

Microspectrophotometric, autoradiographic and energy dispersive X-ray analyses of *Ephedra* root apices and globoid crystals in seed protein bodies were reported by R.L. Peterson, J.N.A. Lott and C.M. Vollmer. Growth and development of *Glycine max* under different light regimes were described by M. Dijack and D.P. Ormrod, and epifluorescence microscopy of picoplankton was discussed by F.R. Pick. Finally, studies of root nodulation of cycads and of compatibility in ectomycorrhizal associations were reported by D.T. Webb, Y. Piché, R.L. Peterson and C.A. Ackerley.

There were 54 attendees at the meeting, which ran from 9:30 am to 3:50 pm, with breaks for coffee and lunch. The questions and discussions were lively, provocative and stimulating, and continued during the final session, devoted to cheese and wine.

The next meeting will be hosted by D.B. Walden at the University of Western Ontario in the fall. Anyone whose name is not on the mailing list and who wishes to receive an announcement notice of the meeting should contact Dr. Walden.

D. Davidson
McMaster Univ.

FEDERATION OF ONTARIO NATURALISTS AWARDS

The Annual General Meeting of FON was held on June 3-5, 1983, duirng which several awards were presented. Three of the awards were made to present or past CBA/ABC members.

George W. Argus and *David J. White* received the Distinguished Service Award "for their efforts in preparing and publishing "The Rare Vascular Plants of Ontario" and their continuing work on the "Atlas of the Vascular Plants of Ontario". Their work has proven invaluable to naturalists and people working for preservation of natural areas across the province."

Steven Varga received an Achievement Certificate "for his efforts in bringing the non-compliance of the Highway 404 extension to the Environmental Assessment Act to the attention of various groups and the courts. This resulted in a precedent setting conviction under the Environmental Assessment Act."

EDITING OF INDENTED IDENTIFICATION KEYS

I developed a simple set of "macro" instructions for formatting indented identification keys for use with the IBM PC micro-computer and WORDIX text formatter. The set loosely follows a method described earlier (Taxon, 28(4):329-335). The indentation of leads is calculated automatically and the key can be printed within the edited text.

I would be happy to send this set of instructions to anyone interested. However, the potential user must have both the IBM PC and WORDIX to be able to use it. Please contact:- A. Ceska, P.O. Box 1761, Victoria, B.C. V8W 2Y1

Adolf Ceska

NOTICE OF PUBLICATION

The second part of the Atlas of the Rare Vascular Plants of Ontario, edited by G.W. Argus and D.J. White, will be published in July 1983 by the National Museum of Natural Sciences. It treats about 100 species in several important families, including the ferns, Asteraceae, Ranunculaceae, and Scrophulariaceae.

The Atlas is available free-of-charge from:- The Rare and Endangered Plants Projects, Botany Division, National Museum of Natural Sciences, Ottawa, Ont K1A 0M8.

The recipients of Part 1 of the Atlas will automatically be sent this and subsequent parts, but if one does not arrive in a reasonable length of time the Museum should be contacted.

BCC INFORMATION

Current Notes from the Biological Council of Canada

The Biological Council of Canada (BCC) is an umbrella organization representing the following biological societies in Canada: The Canadian Botanical Association, The Canadian Phytopathological Society, The Canadian Society of Plant Physiologists, Canadian Society of Zoologists, The Genetics Society of Canada, Entomological Society of Canada, and The Canadian Council of University Biology Chairmen. The purpose of the Council is to "provide an organization through which emmber societies can cooperate or take joint action in assuming the role and major function of initiating policy that affects Biology in Canada". Normally the Council meets twice a year, once in the spring and again in the fall.

The most recent meeting was held on 21 April 1983 at Carleton University in Ottawa. Present at the meeting were G.R. South (President), K.G. Davey (Past President), G.B. Wiggins (Vice President), J.R. Nursall (Vice President), L. Lapierre (Treasurer), D.B. Walden (Member-at-large), and M.B. Fenton (Secretary). Represented were: The Canadian Botanical Association (J.H. Soper, W.G. Barker, J. McNeill), The Canadian Society of Plant Physiologists (John King), Canadian Society of Zoologists (J.R. Nursall), The Genetics Society of Canada (D.B. Walden), Canadian Committee of University Biology Chairmen (John King, H.G. Merriam), Entomological Society of Canada (S.B. McIver, R. Downer), and the Canadian Phytopathological Society (C.B. Willis, C.B. Aube).

The meeting started at 11:00 and ended at 17:00, and covered a wide range of topics of concern to biologists in Canada. Some of these have been treated in more detail in the BCC President's Report to the annual general meetings of constituent societies, a copy of can be obtained from society presidents.

The most recent BCC publication entitled A Statement on Hiring Policy for Scientists in the Federal Government is a detailed commentary on current government procedures for recruitment of scientific staff. Of particular concern to the BCC is the policy of not advertising available positions widely to the scientific community, with the consequent possibility of not finding the best possible, as opposed to a suitably qualified, candidate. Anyone interested in obtaining a copy of this report should contact Dr. G.R. South, Dept. of Biology, Memorial Univ., St. John's, Nfld A1B 3X9. (*See also extracts from the report elsewhere in this issue ... Ed.*)

The BCC is co-operating with the Science Council of Canada, the Canadian Committee of University Biology Chairmen, and the Canadian Council of University Field Stations in preparing an inventory of Canadian Biology Field Stations. The initial part of this survey which deals with university-related facilities has been completed by the CCUBC. By the end of September 1983, the survey of government facilities should also be completed. The purpose of the inventory is to provide an indication of the extent of this resource for people working in field biology and to give a base from which policy recommendations concerning these facilities can be prepared. Anyone interested in more information about this project should contact Dr. M.B. Fenton, Dept. of Biology, Carleton Univ. Ottawa, Ont K1S 5B6

A nominating committee presented to the BCC its recommendation for the recipient of the first BCC Gold Medal, awarded for "outstanding contributions to the advancement of Biology in Canada".

The BCC received some updated information about the circulation of and reaction to an earlier publication, Biological Research in Federal Laboratories. This report has been widely circulated and is receiving considerable positive attention from some politicians.

From 23 to 29 June 1985, the BCC will host the Canadian Congress of Science at the University of Western Ontario, in London, Ont. This will bring together the membership of the BCC and offer a forum for a wide exchange of ideas. Anyone interested in more details about the Congress should contact Dr. D.B. Walden, Dept. of Plant Sciences, Univ. of Western Ontario, London, Ont N6A 3K7.

The BCC unanimously agreed to support the newly formed AASC (Association for the Advancement of Science in Canada) which developed from SCITEC (The Association of the Scientific, Engineering and Technological Community of Canada). SCITEC has been an active lobbying organization, on behalf of the scientific community. An important operation of AASC is COPSE (Committee of Parliamentarians, Scientists and Engineers) which meets regularly in Ottawa and provides an opportunity for people in these three groups to exchange views.

The next BCC meeting will be held in November.

G.R. South
President, BCC

ROYAL SOCIETY OF CANADA NEWS

The Plant Biology Subject Division of the Academy of Science of the Royal Society of Canada welcomes the following three newly elected Fellows.

Dr. André Fortin, Université Laval, has pioneered Canadian research into the mutualistic symbioses between plant roots and fungi for 20 years. He is now actively spearheading the biotechnological exploitation of mycorrhizae in agriculture and forestry. [Dr. Fortin is a member of CBA - Ed.]

Dr. Gordon Maclachlan, McGill University, has made significant contributions to our knowledge of the mechanisms and enzymes of oligosaccharide synthesis in plants, and especially the problems of polysaccharide synthesis external to the plasma membrane. He has edited scientific journals, held many offices in scientific societies, been active in grant selection committees, and has been concerned with science policy in Canada.

Dr. Dennis Parkinson, University of Calgary, is one of Canada's outstanding soil scientists. He has added much to our knowledge of how fungi, the largest component in soil biomass, and the most poorly understood, operate. He has devized ingenious new research techniques, written and taught eloquently and extensively, and built up one of the strongest Biology Departments in Canada.

Congratulations to all three new Fellows.

WHAT'S ON IN SYSTEMATICS AND PHYTOGEOGRAPHY IN CANADA

IV. ONTARIO

(J. Canne, Guelph)

UNIVERSITY OF GUELPH (J. Canne)

John Ambrose — Curator of the University of Guelph Arboretum, working on: a survey of current distribution of rare woody species of Ontario; the biology and phytogeography of certain potentially endangered species (*Gymnocladus dioica*, *Fraxinus quadrangulata*, *Magnolia acuminata* and *Ptelea trifoliata*) for COSEWIC status reports; and procedures to accelerate forest succession as applicable to land reclamation.

Allan Anderson — preparing a checklist and map of the vascular flora of Wellington County with D. Britton (Pteridophytes) and J. Goltz (Orchidaceae); biology of seed germination of *Cypripedium candidum* with D. Britton and M. Brundrett.

George Barron — the interactions between fungal parasites and predators of microscopic animals, e.g., rotifers, amoebae, nematodes.

Don M. Britton — working on the biosystematics of *Isoetes* in western North America with A. and O. Ceska, *Isoetes* in Newfoundland, and *Cystopteris* in Ontario.

Judith Canne — systematics projects on North and South American members of *Agalinis* and *Galinsoga* as well as Eastern North American *Viola* and *Prenanthes*.

Ken Carey — levels of genotypic and phenotypic variation and plasticity in natural plant populations; the effects of life history characteristics on variation; the biosystematics of *Plectritis* (Valerianaceae).

Joe Gerrath — taxonomy and morphology of Desmids of the world.

Usher Posluszny — structural and developmental studies on species of the Zosteraceae, Scheuchzeriaceae and Lilaceaceae.

Robin Scribailo — completing a Masters thesis with Usher Posluszny on the floral biology of *Hydrocharis morsus-ranae*.

Mirek Sharp — just completed a Masters thesis on factors affecting the distribution of *Rhexia virginica* at certain localities in Ontario (under P.A. Keddy).

LAURENTIAN UNIVERSITY

Keith Winterhalder — casual collections in the District of Sudbury that will form the basis for an eventual provisional checklist of the flora of the district.

UNIVERSITY OF OTTAWA (J. McNeill)

J. Thor Arnason — taxonomic relationships of corn varieties in Belize.

Paul Keddy — determination of the ecological factors that influence species composition of wetlands, especially lakeshores; particular interest in the Atlantic coastal plain floristic element in Ontario and Nova Scotia.

John McNeill — biosystematic projects on *Polygonum*, *Alchemilla*, *Silene* (particularly *S. pratensis*) and other members of the Caryophyllaceae; several numerical taxonomic studies.

Connie Nozzolillo — phytochemistry of *Impatiens* and various members of the Fabeae (Vicieae).

Kathy Pryer — research assistant in J. McNeill laboratory, preparing publications on the fern genus *Gymnocarpium* based on her Master's thesis research at the University of Guelph.

Steven Wolf — post-doctoral fellow with J. McNeill working on the cytotaxonomy of the *Polygonum aviculare* complex, and completing publications on *Arnica* from his Ph.D. work at the University of Alberta.

QUEEN'S UNIVERSITY (A. Crowder)

M. Bristow and A. Crowder — have recently prepared work on aquatic macrophyte distributions in the Bay of Quinté as part of Project Quinté.

Adele Crowder — continues research on heavy metal uptake by wetland plants.

J. Gagnon — has begun graduate work on vegetation on tailings in Quebec.

Heather McBrien — working on Master's thesis involving the interaction of *Trirhabda* and *Solidago* in old fields.

H. McIntosh and A. Crowder — have prepared a third report in a series on rare plant distributions and ecology in the Thousand Islands National Park region.

B. McLaughlin — has completed his M.Sc. thesis on the niches and distribution of grasses on heavy metal tailings in Sudbury.

G. Taylor — continuing his doctoral research on the metallic content of wetlands and *Typha* in the Sudbury region.

UNIVERSITY OF TORONTO, ERINDALE CAMPUS (P.W. Ball)

Peter Ball — taxonomic revision of *Carex* in eastern Canada. Also preparing an account of *Quercus* in eastern Canada and has begun a study of *Salicornia* in North America.

Bill Crins — began working on a Ph.D. in 1980, studying *Carex* section Extensae in North America. A list of the vascular plants of Halton County has been prepared.

Jocelyn Webber — completing a revision of *Carex* section Ovales for a Ph.D. Has completed a list of the vascular plants of Peel County.

UNIVERSITY OF TORONTO (J. Eckenwalder)

Janet Anderson — completing an M.Sc. thesis on the genetics and breeding system of Pickerelweed with S. Barrett.

Spencer Barrett — pursues a variety of population biology projects emphasizing breeding systems. On sabbatical in Australia in 1983/4.

Brett Brown — has begun an M.Sc. project to elucidate the origin of a small-flowered race of *Ipomoea hederifolia* in southeastern U.S. with J. Eckenwalder.

Terry Carleton — attacking overstory/understory relationships, and many other aspects of boreal forest community dynamics using multivariate techniques.

Victoria Connolly — well along in a Ph.D. project on hybridization between the introduced White Poplar and the native Aspens, with J. Eckenwalder.

Jim Cruise — well into his second term as

Director of the Royal Ontario Museum. Despite this, he remains cheerful.

Les Cwynar — returned as a U.R.F. after post-doctoral time in Dublin and Seattle. He continues to study the early Holocene of the Yukon.

Jim Eckenwalder — has not forgone Poplar systematics, emphasizing phylogeny and hybridization. Still, he does peek at Morning Glories occasionally.

Sheila Kuja (née McKay) — completing her Ph.D. dissertation on the systematics of the Sand Cherries with J. Eckenwalder.

Jock McAndrews — continues to examine late Pleistocene and Holocene vegetation develoepement in sites ranging from High Park to the Devon Ice Cap.

Patricia McCaw — investigating factors responsible for the rarity of Black Gum in southern Ontario for her M.Sc. with J. Eckenwalder.

John Riley — completed his massive M.Sc. thesis on the phytogeography of the Hudson's Bay lowlands with J. Ritchie. Now peatland specialist with Ontario Ministry of Natural Resources.

Priyah Sarkar — continues his investigations of the cytotaxonomy of Eurasian Wheatgrasses.

Takashi Sawa — deeply embroiled in a generic and tribal revision of the Characeae based on his experience with the cytotaxonomy, development, ultrastructure, and histochemistry of the group.

Joel Shore — his excessive M.Sc. project has turned into a Ph.D. project on the relations between breeding system and floral morphology in *Turnera*, with S. Barrett.

Steve Varga — finishing his M.Sc. thesis on the phytosociology of the Niagara Escarpment with P. Maycock. Has a major sideline in the status of rare plants in the Toronto/York region.

Lorne Wolfe — has begun an experimental M.Sc. thesis on the pollination biology of Pickerelweed with S. Barrett.

UNIVERSITY OF WATERLOO (J. Semple)

Vascular Plants

Jerry Chmielewski — completed his M.Sc. in 1981, now continuing in a Ph.D. program under the direction of J. Semple. He is investigating the relationships of ploidy level to resource allocation and habitat preferences in the *Aster lanceolatus* complex.

Wayne Hawthorn — continuing his studies on the autecology of weeds and the reproductive strategies of colonizing plant species.

John K. Morton — director of WAT, continuing his studies on the systematics of various members of the North American and African floras, as well as his floristic work on the Georgian Bay islands.

Gordon Ringius — began his Ph.D. research studies in the fall of 1981 under J. Semple, investigating the cytology, chemistry and morphology of the *Solidago spathulata* complex throughout North America.

John C. Semple — continuing his biosystematic studies on the Asters, Goldenasters and Goldenrods and related genera of North America. In collaboration with students and others, he is preparing treatments of the Asters and Goldenrods of Ontario.

Norma Claire Shackleford — began her M.Sc. research in September 1980 under the supervision of J.C. Semple. She has nearly completed her study on the effects of polyploidy on the growth and distribution of *Aster pilosus* in Ontario.

Fungi

Adina Fronda — began work on an M.Sc. with B. Kendrick in January 1982. She is studying the movement of selected herbicides and insecticides through successive trophic levels of ponds with special reference to the role played by fungi.

Suha Jabaji — working on her Ph.D. with B. Kendrick, investigating the effects of several selective anti-oomycete fungicides on a standardized *Glomus*-leek vesicular-arbuscular mycorrhizal system.

Bryce Kendrick — with co-workers is continuing research on the systematics, development and ecology of microfungi. Topics include the role of fungi in the trophic structure of streams and ponds; toxicological/ecological studies on aero-aquatic hyphomycetes and vesicular-arbuscular mycorrhizal fungi; and computer graphics applications to systematics and simulations of fungal development.

John Michaelides — completed his Ph.D. in the summer of 1982 under the direction of B. Kendrick. His work on the role of fungi in salt and fresh water systems places emphasis on the trophic structure of temporary woodland ponds and the importance of conidial fungi in energy flow.

Gracia Murase — assisting B. Kendrick with the coral reef project in collaboration with M.J. Risk of McMaster University (Geology) and assisting with the prepararion of two new textbooks, among other projects.

T.R. Nag Raj — a Research Associate with B. Kendrick engaged in the taxonomic and developmental studies of the Coelomycetes. He is working on a book that will treat all genera of Coelomycetes with appendaged conidia.

Tian-yu Zhang — a visiting scholar from mainland China spending 2 years in B. Kendrick's laboratory. He is working on a photographic atlas of fungal spores, with special reference to conidial fungi.

Algae

Hamish Duthie — the use of diatoms in determining historical trends in pH and man's impact on acid-sensitive lakes. Work is also continuing on the biology of Nanoplankton.

Chris Earle — working on a Ph.D. under the direction of H. Duthie and is studying the paleolimnology of Second Marsh on the shore of Lake Ontario. He is concerned with heavy metal sequence in sediment cores and the history of fluctuating water levels in the lake.

Nancy MacNeill — completing her Ph.D. with H. Duthie on the recent paleolimnology of some lakes in Algonquin Park, Ont., that were fertilized in the 1940's. She is examining both chemical and biological aspects.

Paul Hamilton — completing his M.Sc. with H. Duthie. He is developing methods for using nuclear autoradiography as a tool in determining the colonization dynamics and primary productivity of periphyton in Precambrian Shield streams.

UNIVERSITY OF WESTERN ONTARIO (J. Phipps)

Paul Cavers — several projects on the population structure of weedy taxa.

Frank S. Cooke — systematics of Bryophytes of the Great Lakes area.

Tim Dikinson — graduate research on the reproductive biology of *Crataegus crus-galli*.

Diane Fahselt — chemosystematics of lichens, isozyme patterns in lichen populations.

Carol Hagerman — graduate research on patterns of variation in lichen populations.

Bob Jancey — biogeography of *Pinus contorta*, numerical investigation of group structure.

Marc André Lachance — ecology and evolution of yeasts.

L. Orloci — computer assisted techniques in multivariant analysis.

Jim Phipps — systematics and evolution of *Crataegus*.

Paul Smith — graduate research on the reproductive biology of *Crataegus* series Rotundifoliae.

Flemming Ulf-Hansen — graduate research investigating changes in population sizes of North American *Crataegus* with respect to genetic bottlenecks.

WILFRID LAURIER UNIVERSITY

A. Wellwood — professor emeritus, is completing a survey of the flora of Perth County.

UNIVERSITY OF WINDSOR

W.G. Benedict — is continuing identifications of collections from the Windsor area.

AGRICULTURE CANADA, BIOSYSTEMATICS RESEARCH INSTITUTE

Mycology Section (J.A. Parmelee)

Donald J.S. Barr — biology and taxonomy of the zoosporic fungi. Currently investigating the taxonomy of Spizellomycetaceae.

John D. Bissett — Coelomycete taxonomy, biosystematics and ecology of soil fungi, biology of *Trichoderma* species.

Michael P. Corlett — taxonomy of stem and leaf fungi (Pyrenomucetes and Fungi Imperfecti), currently investigating Canadian species of *Venturia* and initiating taxonomic studies on *Mycosphaerella* species occurring on Poaceae and other families of host plants.

Yolande Dalpé — taxonomy and physiology of the vesicular-arbuscular mycorrhizal fungi, mycorrhizal endophytes of Ericaceae, and ectomycorrhizal fungi.

James H. Ginns — ecology, biogeography and taxonomy of forest fungi especially lignicolous basidiomycetes: *Polyporus*, *Coniophora*, *Hericium*.

Stanley J. Hughes — taxonomy of Hyphomycetes; pleomorphy; currently investigating synanamorphs of *Schiffnerula*. Editor of Fungi Canadenses.

Gordon A. Neish — taxonomy and physiology of toxigenic fungi; currently working on *Fusarium* and allied genera.

John A. Parmelee — curator of the Herbarium; obligate plant parasites, rusts, smuts, and mildews; currently working on the parasitic fungi of northern Ont.

Scott A. Redhead — currently studying the taxonomy of *Marasmiellus*, *Marasmius*, *Collybia*, and bryophilous agarics mainly related to *Leptoglossum*. A revision of the generic concept of *Helotium* (Agaricales) has been completed and collaboration with Chinese mycologists continues.

Robert A. Shoemaker — Head, Mycology Sect.; systematics of Pleosporales with current emphasis on monograph of *Leptosphaeria* and allied genera: *Phaeosphaeria* (on grasses), *Paraphaeosphaeria* *Entodesmium* (on legumes), *Nodulosphaeria* (on umbellifers and composites) with correlation of anamorphs (*Coniothyrium*, *Stagonospora*, etc.).

Vascular Plant Section (E. Small)

Susan G. Aiken — systematics of Canadian grasses; completed generic flora of Western Canadian grasslands; initiated generic flora to grasses of Canada; special interests in *Festuca* and *Zizania*.

Guy Baillageon — presently pursuing doctoral studies at Botanical Museum, Berlin-Dahlem; systematics of *Sinapsis*.

I. John Bassett and Clifford W. Crompton — systematics of weedy groups, especially Solanaceae, Chenopodiaceae (*Chenopodium*, *Atriplex*, *Salsola*), Compositae (*Ambrosia*), and Leguminosae (*Lotus*, in association with W.F. Grant, Macdonald College); cytology and palynology of wind-pollinated plants.

Bernard R. Baum — taxonomy of cultivated plants and their wild allies, monographic type studies of world scope, including infraspecific variation; methods of analysis are chiefly numerical taxonomy; currently working on barley (*Hordeum*) and on the generic problem and relationship in Triticeae.

Paul M. Catling — Associate Curator of the herbarium; biosystematics and ecology of sedges (Paludosae), aquatic plants (*Potamogeton*, *Proserpinaca*, *Sparganium*, *Elodea*) and orchids (*Spiranthes*); preparation of an aquatic plant flora of Canada.

William J. Cody — Curator of the herbarium; floristics of Canada; completing manual of ferns and fern allies of Canada; and working towards publication of a flora of the Yukon.

Gerald A. Mulligan — Director, Biosystematics Research Institute; systematics and cytotaxonomy of Canadian weeds and poisonous plants, currently focussed on *Stachys*, *Veratrum*, *Zigadenus*, *Rorippa sylvestris*.

Ernest Small — Head, Vascular Plant Section; systematics of crop plants and their allies, currently employing numerical taxonomy, cytotaxonomy, comparative anatomy and comparative ultrastructure to clarify *Medicago* and all allied genera in tribe Trifolieae (Leguminosae); preparing treatment of cultivated crop plants of Canada.

Alina E. Stahevitch — systematics of Canadian weeds, stressing cytotaxonomy; currently completing taxonomic studies of Balsaminaceae and initiating studies of *Stachys* (in association with G.A. Mulligan) and *Artemisia* section Absinthium.

Suzanne I. Warwick — systematics and genecological studies of newly introduced problem weeds in Eastern Canada (*Abutilon theophrasti*, *Apera spicaventi*, *Setaria faberii*, *Sorghum halepense*, *Panicum miliaceum* and *P. dichomiflorum*); morphology, cytology, population variation and isozyme variation; genecology of herbicide-resistant weeds.

NATIONAL MUSEUM OF NATURAL SCIENCES, BOTANY DIVISION

Vascular Plant Section (J.M. Gillett)

G.W. Argus — *Salix* for the Flora of the Southeastern United States, Atlas of the Rare Vascular Plants of Ontario, joint project with H.M. Raup on the Flora of the Athabasca Sand Dunes.

J.M. Gillett — publication of The Flora of Gatineau Park, Quebec, editor and contributor of Clover Science and Technology; preparing articles for The Canadian Encyclopaedia; preparation of book on Arctic Wildflowers.

E. Haber — the taxonomy of *Pyrola*.

Allen and Joyce Reddock — taxonomic problems in *Platanthera*.

D. White — preparation of the Atlas of Rare Vascular Plants of Ontario with G.W. Argus.

Lichenology Division (I.M. Brodo)

Irwin M. Brodo — Curator of Lichens; is continuing studies on the systematics of the *Lecanora subfusca* group, the lichen flora of the Queen Charlotte Islands, and other lichenological problems with Canadian lichens.

Stephen Clayden — graduate student at Université de Montréal, has been at the Museum working on his collections from the Abitibi region of Québec.

Sharon P. Gowan — graduate student at Carleton University, finishing her thesis on the Lichen Flora of Fundy National Park, New Brunswick. Her research work is done at the National Museum.

Pak Yau Wong — curatorial assistant in Lichenology, continuing his work on a lichen flora for Southern Ontario.

ROYAL BOTANICAL GARDENS, HAMILTON

James S. Pringle — working on the Gentianaceae for the Vascular Flora of the Southeastern United States; Gentianaceae in part (*Centaurium*, *Cicendia*, *Gentiana*, *Gentianella*, *Halenia*) for the Flora of Ecuador; taxonomic revision of *Gentiana* in northwestern South America; new taxa and new combinations in Neotropical Gentianaceae; nomenclature of the Amur Lilac, *Syringa reticulata*; several projects in Canadian botanical history.

NON-AFFILIATED

Mary I. Moore — survey of species of *Carya*, especially *C. tomentosa*; variation in *Acer rubrum*, *A. saccharinum* and their hybrids.

The previous three lists were printed in the CBA/ABC *Bulletin*, Volume 15, Numbers 1, 2 and 3 (1982). If you know of anyone who has been omitted from any of the lists published so far, would you please contact the Secretary of the S & P Section: Dr. J.M. Canne, Dept. of Botany & Genetics, Univ. of Guelph, Guelph, Ont N1G 2W1

NEW PUBLICATION

A Preliminary Bibliography for Garden History in Canada, by Edwinna von Baeyer. 1983. National Historic Parks and Sites Branch, Parks Canada. 24 pp. Eng., 26 pp. Fr. Free, from Research Publications, Parks Canada, 1600 Liverpool Court, Ottawa, Ont K1A 1G2.

BCC STATEMENT ON HIRING POLICY FOR SCIENTISTS IN THE FEDERAL GOVERNMENT

The following are extracts from the Statement issued by the BCC. Copies of the report may be obtained from Dr. G.R. South, Dept. of Biology, Memorial Univ., St. John's, Nfld A1B 3X9

Introduction

This statement represents a continuation of the efforts of the Biological Council of Canada to bring about an objective assessment of the hiring policy for research scientists in the Federal Government. In recent months the BCC has addressed specific issues within federal hiring policy in letters to resposnible officials. Responses have shown unwavering dedication to the present policy and apparent reluctance to examine the issues raised. The intent of the present statement is, then, to outline fully the BCC view on hiring practices. The BCC trusts that this statement will be accepted in the constructive sense in which it is offered, for the professional societies of life scientists share with government the concern that excellence in scientific research in Canada be enhanced in every possible way.

Current hiring policy

The search procedure to hire a research scientist in a department of the federal government is:

1) to first advertise within the federal service;
2) to examine applications currently on file with the Public Service Commission, applications remaining current for 6 months;
3) to seek other candidates by whatever means are deemed appropriate;
4) and if no qualified Ph.D. is found, some departments hire at the M.Sc., or B.Sc., level; the incumbent on full salary enters a university to obtain a Ph.D. in the appropriate area of specialization, a period ranging from 2-4 years.

An applicant can be hired at completion of any of these search levels. At no point is there a requirement that all qualified Canadians be made aware of the vacancy through advertising in channels now accepted as standard practice by the scientific community, although some positions are advertised on a selective basis.

Inadequacies of the hiring policy

1. The current search procedure for filling positions fails to distinguish between a suitable and the best available candidate.

2. Current hiring practice based on inadequate advertising does not follow logically from the federal government's own investment in NSERC research funding to university professors because graduate students supported by professors' grants during their advanced study are not necessarily even aware of positions for which they are reasonably qualified.

3. The present system can result in very different classes of graduate students undertaking studies in the same laboratory.

4. The hiring policy of the Department of Agriculture (Research Branch) is based on the premise that there are not enough Ph.D.'s of appropriate background to meet the needs of the Department, estimated to be 50 agricultural scientists each year for the foreseeable future.

The solution proposed is to hire graduate students, maintaining them on full salary through completion of their Ph.D. studies.

a) The premise that there are not enough agricultural scientists qualified in required disciplines is not adequately documented.
b) Hiring prior to the Ph.D. level runs counter to the experience of university professors that the potential of an individual for a productive career in research cannot be predicted accurately before the preson has had some advanced research experience, such as study and preparation of a thesis for a Ph.D.
c) As part of its strategy for recruiting scientists, Agriculture Canada has proposed a Planning-Implementation Committee comprising senior staff of the Department and the Deans of the eight Canadian Faculties of Agriculture. The BCC asks on what basis is liaison with the universities in Canada restricted to Faculties of Agriculture?

Other solutions to the problem

1. Positions could be filled through post-doctoral fellowships in particular sectors of science where vacancies exist. If widely advertised on a normal competitive basis, these would attract young Ph.D.'s in allied fields, encouraging them to re-direct their otiginal course of specialization into one where employment was assured.

2. Scholarships could be offered by the government to encourage graduate students to undertake Ph.D. studies in selected fields where vacancies exist for full-time employment.

3. The BCC commends the Department of Agriculture for having projected recruitment needs to 1986.

BOOK REVIEWS

Wildflowers Genetics. A Field Guide for British Columbia and the Pacific Northwest, by Anthony J.F. Griffiths and Fred R. Ganders. 1983. Flight Press, Vancouver, B.C. xi + 215 pp. Softcover. $9.95 Can.

Why are Blue-eyed Marys pink? Why do some clovers have a chevron pattern on the leaves while others do not?

In the preface to this book, the authors state that the aim is to: "... heighten your enjoyment and awareness of nature through a knowledge of genetics. ..... Genetics provides a new way of looking at nature that offers insights into the complexities of the natural world." This is done in two ways — firstly, by showing what genetic variations exist in wild populations, and secondly, by showing how to perform simple genetic experiments.

The first chapter is titled "What is Genetics?". In 34 pages, the authors manage very successfully to describe the principles of genetics at a level understandable to anyone, and also explain the differences between genetic, environmental and developmental variations. I particularly like the way in which they have done this without becoming too simplistic. The second chapter describes Mutations, and provides examples and descriptions of plants showing the effects of mutations. Every plant described is listed under its common name, with the full scientific name, author and family also provided, and there is a black and white drawing to illustrate the relevant feature. Further chapters, on Ploymorphisms, Polymorphisms of Breeding Systems, and Formation of Species, follow the same arrangement. A 16-page color insert, with 35 plates, provides the opportunity to more fully show color variations of flowers and foliage.

Finally, there is an appendix listing areas in British Columbia and Washington where some of these variants may be found, a glossary to define genetical and botanical terms, and a list of suggested further reading.

This is an excellent book, describing the types of variation that may be seen during any walk, whether it be of weedy species in town or while hiking in an alpine meadow. The authors have been successful in their aim to describe genetic variation in a manner that will be understandable by the majority of amateurs. The book will be of use to anyone interested in observing the variety of forms that are found in nature. All the plants described are from British Columbia — but they all occur outside the province, and some are widely distributed throughout the Northern Hemisphere. Therefore, the book should be very useful, in and out of the province, to explain the hows, whys and types of plant variation. I recommend this book to anyone interested in wild flowers.

The only mistake that we could find was an apparent misidentification of *Geranium robertianum* as *G. molle*, both in the diagram and the short description. Both are weedy species that occur in British Columbia.

The book may be obtained from the publishers: Flight Press, 3630 West Broadway, No.2, Vancouver, B.C. V6R 2B7

Sylvia Taylor
UBC Botanical Garden

Die wichtigsten Pflanzengesellschaften der Moore NW-Europas, by K. Dierssen. [The most important plant communities of NW European mires.] 1982. Conservatoire et Jardin botaniques Genève. 382 + xxxii (photos) + 27 (app.) pp. ca. $200.

Using the techniques of the Braun-Blanquet phytosociological school, Klaus Dierssen examined the mire vegetation of Iceland, the Faeroe Islands, the British Isles and Norway. In the introductory chapters (pp. 7-72), he outlines his methods, describes the climate and geology of the regions studied, and provides an overview of the various criteria used in the classification of mires and mire complexes. This general introduction concludes with chapters on the genesis of mire structures and the correlation between climate and the distribution of various mire types.

The main body of the book (pp. 73-222) describes the plant communities, which are classified into the following four classes:- Littorelletea uniflorae (6 associations); Phragmitetea (7 assoc.); Scheuchzerio-Caricetea nigrae (32 assoc.); and, Oxycocco-Sphagnetea (11 assoc.). The author focuses his attention on the latter two classes, and treats Littorelletea and Phragmitetea in a "rather abbreviated form". Although he gives a short description of higher syntaxonomical units such as classes, orders and alliances, his description of plant communities is centred around associations. For

each association he provides the following information:- characteristic and/or differential taxa, nomenclatural types, synonyms, synmorphology, synsystematics, synchronology, syndynamics, and synecology. In the sections on synsystematics, Dierssen usually describes several subassociations. In the sections on synecology, he deals with the ecology of each association and gives the main ecological factors determining each plant community. He lists only pH measurements of the soil characteristics, but refers to those publications that dealt with some aspects of the ecology of the plant community. The classification of the plant communities is based on about 6000 relevés. The distribution of the communities is documented on maps and in graphs which relate the occurrence of stands to latitude and elevation. The floristic composition of the described communities is documented in numerous (57) phytosociological tables, which list either the original relevés or synoptic tables of communities described by other workers.

The remaining text (pp. 223-260) consists of chapters on gradients and community distribution, vegetation complexes in mire vegetation, and human influence on mire vegetation, plus a short note on the taxonomy of certain plant taxa. The book concludes with a lengthy account of the mire stands investigated, numerous literature references, and three useful indices (species names, vegetation and ecological terms, and names of vegetation units). Photographs at the very end of the text depict some plant species, mire complexes and human influences.

In the introduction, Dierssen stated that one of his aims was to compare the results of the so-called Uppsala School with the classification developed in central Europe by the Zürich-Montpellier School. The author has an excellent knowledge of central European mire vegetation, and he applied this experience in the present book. The result is a very comprehensive treatment of the mire vegetation of NW Europe. This work will serve as a useful reference for a long time to come.

The importance of the book extends far beyond the boundaries of the area treated. Most of the species that occur in the mires of northern Europe are circumpolar, and either form almost identical plant communities in Canada or are members of similar vicariant syntaxa. With a few exceptions (such as La végétation des tourbières et les sphaignes du parc des Laurentides, Québec, by R. Gauthier. 1980. Etudes Ecologiques #3, Laval, Quebéc. 634 pp.), Canadian systems of wetland classification are based on criteria other than floristic composition. I hope that these classifications will soon be complemented by floristic ones developed along the same lines as those exemplified in this book.

My only criticism is the exorbitant price. The standard price for books of this type has slowly climbed to three digits. This one, however, costs about $200. Even considering the numerous tables and maps appending the text, this amount is still very high for a soft-cover book enclosed with its appendices in a box that, in my case, did not survive shipment from Europe. It is hard to understand why, in this revolutionary time when electronic devices are aiding information transmission and typesetting, the price of books is comparable to when they were scribbled on parchment paper by armies of monks.

Adolf Ceska
B.C. Provincial Museum

PERSONALIA

Dr. Arthur N. Langford, Emeritus Professor of Biology, Bishop's University, is on the move again. Dr. Langford returned to Canada in 1980 from Swaziland where he had spent 4 years with CIDA teaching in and developing the Department of Biology at the University College of Swaziland. On January 1983, Dr. Langford was appointed as Executive Director of the Long Point Bird Observatory, Port Rowan, Ontario, and took up residence on April 1. He characterizes himself as "Retired, but interested in further formal biological activity". Dr. Langford has recently forwarded to CBA/ABC a "windfall" donation, which resulted as a profit from the Annual Meeting held in 1976 at Bishop's University.

SPECIAL OFFER

Aspects of Photosynthesis, by Gaurangakumar Das. 1981. Mitra Das, 121/A Bipin Behari Ganguly Street, Calcutta, 700 012, India. 213 pp. Hard cover. A comprehensive text monograph, directed towards teachers, students and research scholars who wish to grasp quickly an understanding of photosynthesis. (Reviewed in CBA/ABC *Bulletin*, Volume 15, Number 1, January 1982).

The author announces a special price of U.S. $15.00 (Can. $16.00) for members of the Association. This price includes postage (surface mail). Payment must accompany order. Send order and remittance to the publisher at the address above.

The Bulletin of the Canadian Botanical Assoc.
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Issued quarterly in January, April, July and October, and sent to all members of the Association. Non-members may subscribe at a price of $20.00 p.a. ($5.00 per issue) post free. Cheques or money orders (in Canadian funds ONLY) should be made payable to "The Canadian Botanical Association" and addressed to the Editor.

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Inquiries about membership of the CBA/ABC should be addressed to the Secretary of the Association:- Dr. Iain E.P. Taylor, Department of Botany, University of British Columbia, Vancouver, B.C. V6T 2B1