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PATRON

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

PATRON

SON EXCELLENCE LA TRÈS HONORABLE JEANNE SAUVÉ, C.P., C.C., C.M.M., C.D., GOUVERNEUR GÉNÉRAL DU CANADA

IN MEMORIAM

BERNARD BOIVIN, F.R.S.C.

Dr. Bernard Boivin died in Quebec City on 9 May 1985.

Bernard was born in Montréal on 7 June 1916. He became interested in botany as an amateur long before entering university. He received his B.A. in 1937 from Collège Sainte-Marie, his L.Sc. in 1941 from University of Montréal, and his Ph.D. in 1944 from Harvard University. In the course of his studies he was greatly influenced by such eminent botanists as Frère Marie-Victorin, M.L. Fernald and Hugh Raup.

Bernard's thesis at Harvard was a world-wide monograph of the genus *Thalictrum*. This was written in Latin. During the Second World War he served as a translator and code-breaker (Japanese) in the Pacific Region. While on leave in Australia he wrote a small monograph on the genus *Westringia*.

In 1946-47 Bernard was employed as a botanist at the National Museum of Canada with Erling Porsild. In 1947-48 he was a Guggenheim Fellow at Harvard University. In June 1948 he joined the then Botany and Plant Pathology Division of the Department of Agriculture at Ottawa. He remained there through the name change to Plant Research Institute and later to the Biosystematics Research Institute until December 1979 when he transferred to the Department of Agriculture Station at Ste-Foy, Québec. He retired from the Department at age 65 in 1981. Bernard took leave from his duties at Ottawa in 1965-66 and 1969-70 to be a Visiting Professor at Laval University and the University of Toronto, respectively. After his transfer to Ste-Foy, he was once again associated with students in botany while working in the Louis-Marie Herbarium at Laval University.

Bernard's field work was conducted mainly in the Prairie Provinces during the years 1949 to 1960. His Flora of the Prairie Provinces resulted from these field studies. His Enumeration des plantes du Canada was a monumental work.

Bernard had a great interest in the history of Canadian botany and of Canadian botanists. He accumulated extensive files as a result of these interests. His Survey of Canadian Herbaria was an end product of this interest. During his productive botanical life he published over one hundred papers. A list of these will be published in The Canadian Field-Naturalist, together with a more extensive tribute.

Bernard's friends will remember him as one who was always ready to help when approached. His knowledge of Latin and of the Botanical Code of Nomenclature made him in great demand. He will be sorely missed.

Bernard is survived by his wife Cosette at Québec City, a son Jacques in Montréal, a daughter Hélène in Ottawa, and a sister Lilian in Halifax.

William J. Cody
B.R.I. , Ottawa

CBA/ABC ANNUAL MEETING 1985

The CBA/ABC Annual Meeting 1985 was held under the umbrella of the first Canadian Congress of Biology at London, Ontario, June 23-28.

The Association was well represented at the Congress, with one of the highest attendances in resent years and a very high number of papers and posters.

The winners of the CBA/ABC awards for 1985 were: George Lawson Medal for cumulative contributions. - J.C. Ritchie; Mary E. Elliott Service Award - Sylvia Taylor; and Lionel Cinq-Mars Award for the best student paper - Scott D. Wilson of the University of Ottawa.

A fuller description of the meeting and the citations for the awards will appear in the next issue of the *Bulletin*.

Meanwhile - congratulations to the local organizing committee at the University of Western Ontario for a good job well-done.

GRADUATE STUDENTS PROVIDE FUNDS FOR CBA/ABC CONSERVATION PROJECTS

The Conservation Committee, with the support of the CBA/ABC Executive, decided to officially object to the building of a highway through a critical wetland complex along the Holland River in Ontario. Free legal advice is available from the Canadian Environmental Law Association, but the office costs of being an objector would have been more than the Association could pay.

In the past few months, graduate students in the University of Toronto decided to do whatever was necessary to raise the funds required. The first of a series of fund-raising projects was a bird-a-thon under the direction of Kevin Kavauth, and this alone resulted in more funds that what we estimate will be needed. Should this amount be insufficient for some reason, the students are prepared to proceed with bake sales, plant sales, etc., in order to produce even more money.

Hats off to the U. of T. Conservation Group!!

Dianne Fahselt, Chair
Conservation Committee
CBA/ABC

ATTENTION, STAMP COLLECTORS

Canada Post has issued a mint souvenir stamp pack featuring 8 Canadian wildflowers and 5 trees. The packs cost $3.00 Can. each from local post offices or by writing to Philatelic Service, Canada Post, Ottawa, Ont K1A 0B5 (add 50¢ for orders under $5.00).

CANADIAN WILDLIFE FEDERATION AWARD

The Canadian Wildlife Federation 1985 Roland Michener Conservation Award has been presented to the Hon. John Fraser, P.C., Q.C., Minister of Fisheries and Oceans, for his exceptional personal dedication.

RARE PLANT LOSS?

We returned to Vancouver from the CCB meetings to find that one of B.C.'s rarest plants had hit the local newspaper - complete with colour photograph. Unfortunately, it was a tale of woe.

The Phantom Orchid, *Eburophyton austiniae*, is the rarest orchid in B.C. and one of the rarest plants in Canada. It is known to grow at only two (possibly three) confirmed locations in B.C. (the only province in which it occurs), one of which is on Saltspring Island in the Gulf of Georgia. The area on Saltspring is now expected to be imminently approved for a subdivision. The proposed development was taken to court but was given permission to go ahead on the developers' agreement to set aside some land to protect the orchid. Two 30-metre square sites have been designated as land reserves. The developers and certain ministry employees believe that this will be adequate protection. Many botanists disagree - but it does not appear that anything can be done at this stage in time. The orchids in this site will probably be lost because the reserves are too small to protect the plants lying, as they do, in the middle of the subdivision and in view of the cutting down of the trees.

The status of the second site is also somewhat uncertain. The area was to be dedicated as an Ecological Reserve in 1979 but the owner of the land discovered that there was no guarantee that the property would not be sold at some future date. She therefore called a halt to the deal until she could get such a guarantee. Negotiations are still in progress at the present time.

There is reported to be a third confirmed site containing a small number of plants.

One possible good result of the publicity given to the plant by the newspaper article was that two independent reports have been received of a population of the Phantom Orchid in one other area. These reports are not yet confirmed but the area is being investigated.

Information is being collected on the Phantom Orchid and site 2 for consideration by the Conservation Committee of CBA/ABC.

A WARNING

The Missouri Botanical Garden Herbarium News recently carried an interesting item regarding the rental of a car in a foreign country and insurance.

The person involved had a rental car stolen in Mexico and discovered that the 20% deductible referred to in the insurance contract actually applied to the replacement cost of a new automobile if the car was stolen from a non-locked enclosure. The cost was $1900 US!

He also issued a warning that the home country insurance policy should be checked as many policies in the United States do not cover rental loss.

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CBA/ABC 1985 BANQUET SPEECH

The after-dinner speaker at the 1985 Banquet was Dr. Roy L. Taylor of the University of British Columbia Botanical Garden. His speech is reprinted here as it was thought to be of interest to members of CBA/ABC not able to attend the Annual Meeting.

New Directions - New Plants: A Role for Botanical Gardens in the 80's by Roy L. Taylor

I am pleased to be able to address the Canadian Botanical Association as we are now more than 20 years past our founding. I was privileged to be intimately involved with the Association at that time and to see the growth and development of an important voice for botanists in the biological community in the years since. The need of a greater awareness of our botanical resources and heritage have not diminished in the past two decades, indeed the importance of a greater understanding of the presence and biology of our green heritage has grown as greater social demands has caused increased pressures on our natural resources. I urge each of you to exercise your responsibility as scientists to insure that our natural heritage is maintained for our future generations.

On reflection for the preparation of this talk, I felt that I would like to share with you some of my thoughts and concerns regarding future directions for botany in Canada. I remain concerned for the need of a greater awareness by each of us as professionals to promote and develop a greater appreciation by our supporting public for our chosen field of scientific research and development. How can we best provide leadership in Canada's stewardship of its future biologists and its plant resources? As intimated during the opening sessions of this congress, we as Canadian scientists should not belittle our achievements. Au contraire, we must make an increased effort to publicize and promote our findings and create a greater public awareness of our importance. We must not be content to let someone else do our job as we are surely the best qualified to explain to the public and out other scientific colleagues what we represent and the contribution we are making and can make to our collective communities.

I am convinced that the time of the isolated ivory tower concept must be dispelled or we will not be masters of our own house. What a pity to see years of education and experience be lost and stifled because we were afraid to speak out on our own accomplishments. Some individual botanists do, but collectively as a Society we have not carried out this responsibility. We msut become part of the scientific community at large and play a positive role, or be content to senesce without hope of a new season of growth and development in the future.

Perhaps I can illustrate an example of a research and development program at my own institution, the UBC Botanical Garden, to show how we can contribute significantly to the creation of a greater awareness of the supporting public. You have probably wondered why you have a brochure at your table from UBC - well, I am proud of the program and wish to expound briefly on what we are doing now and for the future. On behalf of the Garden staff, I wish to share our experience with you.

Speaking of sharing brings to mind an incident at the Missouri Botanical Garden. In front of Shaw's mausoleum on the main Garden site are two life-size classic Greek statues, one female, one male, in a state of complete undress. They are facing one another across the pathway and have been in that position for over a hundred years. As Dr. Peter Raven recently elaborated to me, one day an angel appeared and touched both of them and indicated that they would assume normal human attributes for one hour, and one hour only. Upon touching them, a shy look enveloped both of their countenances and they quickly rushed toward each other, embraced, and ran off behind the building into a Sassafras grove. Much noise and thrashing about took place! Fifteen minutes later, they emerged with rather sheepish but satisfied looks on their faces. When the angel saw them, the angel reminded tham they still had 45 minutes left and the two appeared somewhat unsure and pensive. Finally, the man said to the woman, okay, let's go and try the *Quercus alba* glade (after all they had had an opportunity to absorb much about botanical taxonomy during the past 100 years and they were classic Greeks!). This time, you hold the pigeons and I'll crap on them!

We, at UBC Botanical Garden, don't want to create such allusions, but we do wish to share our success with you.

The Plant Introduction Scheme of the Botanical Garden, known as P.I.S.B.G., had its beginning several years ago. For some time, we had been trying to encourage the acceptance and use of new plant cultivars for the public through an ad hoc introduction program with the nursery inductry. Unfortunately, we had difficulty in achieving positive results as landscape architects and contractors were hard to convince to use the plants as they were not readily available, whereas the growers and producers said there wasn't a sufficient demand to grow them. A dilemma!

What were we to do? We had spent considerable time, energy and talent searching for new plants on plant expeditions, receipt of new plants through exchanges and growing them in our garden components. In addition, much research on the biology of their growth characteristics and culture had been combined with development of propagation and production technique procedures. How could we overcome this bottleneck of utilization of our research and development?

An advisory committee drawn from the commercial industry was established - in fact, three committees were established: a research committee, an introduction and release committee, and a publicity committee. Once our plan was achieved and put into place, research support was sought and acheived - amounting to $150,000 per annum for three years. This year on March 1, four cultivars either developed or selected were put into the public market. Two years of previous production by nurseries under contract to the Garden have resulted in 300,000 new plants going public. We anticipate approximately one million plants by March 1, 1986, and a total of six cultivars or recommended plants inroduced to the public. We receive a royalty on each plant produced which is collected by the C.O.P.F. (Canadian Ornamental Plant Foundation) of which 90% is returned in hard dollars to the Garden. A much-needed cash inflow in time of restraint. Cooperative arrangements have been made to have all introductions tested

at nine institutions; six in Canada and three in the United States.

The program has achieved international status with our introductions now sold to continental Europe, United Kingdom, United States, New Zealand and Japan. Four programs patterned after ours have been initiated: one in Ontario, two in the United States and one in Scotland. Expert advice has been sought from our staff for the launching of these programs.

Two of our new introductions have been developed from native British Columbian plants as a result of our consistent effort in researching and inventorying our flora. An eight-acre garden component devoted to native plants has been developed to provide a living gene bank for the flora.

I have related this successful program to you because it is based in Canada, represents how research and development can be successfully translated into an economic reality, and thereby gain much-needed recognition and confidence of how University research can benefit the supporting community. Such a success was only possible because we made a concerted effort to understand why we were conducting research on our plant collections and had developed a policy on plant acquisition that met the needs of the Plant Introduction Scheme. It is also important to recognize that the success was possible because we established a priority for our plant introduction program, created a cooperative staff project and devoted considerable staff time to it. And finally, we involved, in a very positive way, the user community in helping to formulate the program and we treated them as legal business partners in a research and development project. Coupled with these basic essentials, we have developed an innovative publicity program involving the printed word, radio and television. Publicity is essential and must be conducted to compete with the myriad of other commercial projects. We have a proven product that has received excellent acceptance, but you must let people know about your program. Best of all, I can tell you that it is worthwhile to see people react in a positive and supportive manner to a University research program. All the staff feel as though they are part of a creative and useful service to the public.

If you have a botanical garden in your institution, I hope that you lend positive support to it. A garden is designed to provide for research, teaching and public education. Botanical Gardens are excellent facilities in which to conduct short- and long-term research programs. Staffs are anxious to use their collections, so take advantage of the opportunity to do so.

We cannot all be involved in a plant introduction program, but it behoves all os us to think whether we could create more public use and awareness of our research. We Canadians are innovative, let us not hide "our light under the bushel". Give people in all walks of life an opportunity to work with you in achieving a new awareness of our special attributes.

I hope you will all go forward from this meeting realizing that a new awareness of the importance of botany in Canada has been forged in relation to our biological uniqueness. There are exciting times ahead and botanists should be part of that excitement. Don't forget to play your part!

TEACHING SLIDES AVAILABLE

I would like to make members of CBA/ABC aware of a set of teaching slides on reproduction in Jack Pine, *Pinus banksiana*, which has been assembled by Mary Moore. Mary has had an interest in reproductive biology of Jack Pine for many years, and this material results from work in her home laboratory, work done in association with the Petawawa National Forestry Institute, with Dr. Connie Nozzollilo of the University of Ottawa, and with Dr. Margaret McCully of Carleton University.

I have been teaching the vascular plant section of an intermediate level course on morphology and evolution of plants and fungi for about 10 years. In the course I emphasize reproductive morphology and rely heavily on projection slides to illustrate lecture material. I have been using a set of Mary Moore's slides for about three years now and find them to be an excellent teaching aid for introducing reproduction in the genus *Pinus*. The slides are particularly good in that the set combines illustrations of whole trees and branches, macroscopic views of intact and dissected male and female cones, and microscopic views of cones over a range of developmental stages. I find that students are much better able to relate external form and internal structure after seeing these slides, and many students have commented favorably on the series.

The set illustrates the position and appearance of the male cones as they emerge from winter buds, and also illustrates stages of microsporogenesis and pollen grain development based on 2 µm thick sections of resin-embedded tissue. Photographs of living, unstained microspores are also included. The structure of female cones is illustrated by macroscopic photos showing the position of ovuliferous scales and bracts and the appearance of the micropyle at the time of pollination. Photomicrographs of sections of both paraplast and resin-embedded material illustrate formation of the megasporocyte, germination of the pollen tube, free-nuclear and cellular stages of megagametophyte development, and fertilization stages in the third year of female cone development. Embryo development, illustrated by whole embryos dissected from maturing ovules, clearly show suspensor formation and cleavage polyembryony. Photographs of whole female cones show external appearance at the beginning and end of the second and third years of development. The set primarily illustrates Jack Pine, *P. banksiana*; however, photographs of White Pine, *P. strobus*, and Red Pine, *P. resinosa*, are used when they better illustrate a particular feature.

The set of 33 slides, with a detailed description of each slide, is available for $65.00 Can. (including postage and handling) from:- Mary I. Moore, 6 Laurier Avenue, P.O. Box 159, Deep River, Ont K0J 1P0.

Nancy G. Dengler
Dept. of Botany
Univ. of Toronto

CANADIAN WILDLIFE SERVICE REDUCTIONS

Gerry Mulligan, President of CBA/ABC for 1984-85, wrote on behalf of the Association to the Minister of the Envrionment redarding the cutbacks in the Canadian Wildlife Service. The original letter was sent in December 1984, the reply is dated March 28, 1985, and was received on April 15, probably due to the fact that the President's address was wrongly typed as the National Museum of Natural Sciences. We print Mme. Suzanne Blais-Grenier's reply below.

Dear Mr. Mulligan,

Thank you for your letter of December 14, 1984 regarding reductions in the Canadian Wildlife Service.

While I can certainly sympathize with your concern, I would like to mention, however, that in each of the past ten years, the expenditures of the federal government have exceeded its revenue. These continuing deficits have led to enormous growth in the burden of debt and the costs of servicing that debt. Unless we begin to put our financial house in order, the burden of debt will continue to mount rapidly in the future.

In order to maximize and make the most efficient use of our resources, I have examined programs and their relationship to the mandate of this department. In this determination, we have closely examined the activities of the Canadian Wildlife Service in order that they stick closely to their responsibility for migratory birds, endangered species and our international obligations. We wish to continue and improve upon the outstanding work in the above areas that the Canadian Wildlife Service has done over the past number of years. While we are reviewing our expenditures and examining areas of internal efficiencies we are searching for ways of providing more mandate-related services with current resources, although we must slow the rapid expansion of the past to allow us the opportunity to be better able to direct our resources.

The Wildlife Interpretation Centres provide an important opportunity for Canadians to understand their wildlife heritage as well as providing tourist benefits to local residents. But they are not directly essential to our mandate. Furthermore, they lend themselves well to local management and operation. I have already been in touch with my provincial colleagues and with local organizations and groups interested in managing these centres and I am hopeful that they will be able to assist us in keeping them open. It does indeed provide a new opportunity for local and private initiative and already a number of groups have expressed interest in managing the operation of these centres across the country.

As you will no doubt have learned by now, I have reinstated the Herring Gull Egg Monitoring program in the Great Lakes. I would point out also that the Department of Environment will continue its Great Lakes Toxic Chemicals program consisting of 78 persons and $5.8 million annually.

Not all research in national parks will be eliminated. Althought the reductions in the Canadian Wildlife Service will affect some research in western and northern parks, alternative means such as the use of private consultants and universities are being examined to ensure that Parks Canada's research requirements are met.

Environment Canada will continue to monitor the effects of forest pesticide spraying on migratory birds.

I agree in principle with the need to maintain and add to the national parks system. In these times of financial restraint, the maintenance of existing plant and assets must be Parks Canada's first priority. Consequently, the reductions to Parks Canada's capital program affect only new developments planned in exisitng parks. I hope that once the government's financial situation improves, new developments can proceed and the parks system can be further expanded.

This government is committed to maintaining environmental quality as well as diverse and abundant Wildlife resources. Wildlife research will not be discontinued in Canada after these reductions, it is continuing in universities, provinces, as well as in the private sector. These reductions themselves only amount to 5.1% of our total departmental workforce. We will retain a vital and effective Canadian Wildlife Service with a well defined mandate. This service will have some 300 persons across Canada and an annual budget of approximately 20 million dollars.

For those employees who are affected by these reductions, every effort has been made by the department and will continue to be made to secure alternate employment elsewhere in the Public Service. I hope that these explanations put the reductions into perspective for you and clearly state to you that this government has a strong commitment toward environment and the protection of Wildlife.

Yours sincerely,

Suzanne Blais-Grenier

NEW CANADIAN SOCIETY AND JOURNAL

The first issue of a new Canadian journal appeared earlier this year.

The Canadian Wildflower Society was founded in mid-1984 by James A French, and is now publishing Wildflower, a quarterly publication devoted to the study, conservation and cultivation of Canada's native and naturalized flora. Each issue will feature an item titled "Conservation Commentary", which is intended to provide a round-up of events dealing with conservation. The Society plans to provide a code of ethics for its members.

The Society is presently based in the Toronto area but hopes to form provincial chapters across Canada and also to develop a core of resource persons across the country.

Membership in the Canadian Wildflower Society and subscription to Wildflower costs $15 Can. per year. Make cheques payable to "Wildflower", and mail to 35 Bauer Crescent, Unionville, Ont L3R 4H3

CBA/ABC CONSERVATION COMMITTEE

Annual Report, July 1984 - June 1985

Current members of the Committee are: Dianne Fahselt (Chair), George Argus, Vernon Harms, George Ledingham and Paul Maycock. Regional contact persons are: B.A. Roberts (Nfld), H. Hinds (Maritimes), R.A. Sims (N. Ont. - substituting for J. Jeglum in 1984-85), A.A. Reznicek (S. Ont.), A. Bouchard (Que.), J. Shay (Man.), J.S. Rowe (Sask.), and P. Achuff (Alta.).

1. Canadian Council on Ecological Areas: CBA/ABC continues to be represented on CCEA. An important contribution of CCEA has been to draft a position paper concerning guidelines for management and research in ecological areas. We are also represented on the scientific committee of CCEA and have participated on this committee in documenting the scientific importance of maintaining natural areas.

2. List of Important Natural Areas: The committee had previously recognized the need for lists of significant areas in different regions of Canada. While Quebec has had lists for some time, both Saskatchewan and New Brunswick now have preliminary lists. A pilot project, which is being overseen by the committee, involves a detailed listing of sites in one county on Ontario. There is also activity in other provinces.

3. Carolinian Canada: The CBA/ABC is represented on the Carolinian Canada Sterring Committee which has overseen the selection during the past year of 35 high priority sites needing protection. The CBA/ABC was strongly represented on the subcommittee that selected the best areas and these areas are now subject to intense efforts to preserve them. A few have actually already been protected.

4. World Wildlife Fund: Input from CBA/ABC representatives was involved in evaluating conservation-oriented grant proposals submitted to the World Wildlife Fund.

5. Gillfillan Lake, Nova Scotia: The ecological reserves program in Nova Scotia will use the Gillfillan Lake site as a pilot reserve. The Bowater-Mersey Paper Company is also interested in establishing a protected area there.

6. Wilson Lake Wetland, Nove Scotia: The CBA recommended preservation of the interesting flora and exemplary wetland at Wilson Lake. Wildlife Habitat Canada is granting $40,000 toward purchase and the Nature Conservancy is interested in contributing as well.

7. Ojibway Prairie, Ontario: We have long advocated burning in the management of Ojibway Prairie, and the Ministry of Natural Resources concurs. This spring, weather conditions and resolve combined to produce an almost complete burn of the area.

8. Ontario Heritage Foundation: The CBA/ABC was awarded a grant of $15,000 to carry out ecological studies under the direction of the Conservation Committee. The funds were approved for a study of savannas. Savanna vegetation is not well-known or protected in Ontario.

9. Holland River Marsh Complex, Ontario: Detailed briefs were sent to two ministries in Ontario outlining our opposition to building a highway through one of the wetlands ranked highest by the province itself. Should hearings be held concerning the matter, the CBA/ABC will be an official objector thanks to fund-raising efforts of graduate students at the University of Toronto! (See item elsewhere in *Bulletin*.)

10. Backus Group, Ontario: CBA/ABC representation continues on the Backus Group. The good news at Backus is that, firstly, the forest salvage project for windblown trees is still being resisted and, secondly, a detailed vegetational inventory is being carried out in the forests by a capable botanist.

11. Matchedash Lake, Ontario: We congratulated the region on their vegetation monitoring program and recommended that the same botanist be hired from year to year is possible in order to standardize the data. One of the botanists who studied there previously was selected to do the study again in 1985.

12. *Aster laurentianus*, Prince Edward Island: The CBA/ABC protested road development in P.E.I. National Park which is threatening the type locality of this rare endemic. So far, we have had no response to our recommendation to preserve the remaining habitat of this plant.

13. Limestone Barrens, Newfoundland: We advocated preservation of the limestone barrens of the Northern Peninsula. The provincial minister's reply seemed positive and he suggested that our association become actively involved in infoming him of additional sites which should be designated as reserves.

14. Wildlife Habitat Canada: This is a relatively new non-government foundation devoted to preservation of habitat and it has unofficially invited CBA/ABC to name some areas which should be protected. Regional representatives to the committee have been asked to provide suggestions.

15. Canadian Wildlife Services Cutbacks: We have written as individuals and as an association to protest austerity moves which will curtail study of environmental problems and research on renewable resources. (See elsewhere in this issue for the Minister's response to the CBA/ABC letter.)

16. Ministry of Natural Resources, Ontario: We responded to this agency with respect to a number of issues which were brought to us, including how forestry techniques affect understorey diversity, the advisability of deliberate plantings of specimens of rare trees into natural forest, and the advisability of transplanting prairie plants into the Ojibway Prairie.

17. Sifton Bog, Ontario: A letter was written to express concern over high-density housing proposed on the eastern border of one of the few surviving acid bogs in southern Ontario.

18. Environmentally Sensitive Area, Port Franks, Ontario: Letters were written objecting to a proposed road through a significant wet meadow which is habitat for *Buchnera americana* and *Pogonia ophioglossoides* and other plants.

19. Natural Heritage League, Ontario: We are a member organization of this leaguw which promotes and co-ordinates protection in Ontario. It has recently asked us for support, monetary and otherwise. We have not yet responded.

20. A number of other items have come to us which are we just beginning to examine or which have been referred elsewhere in CBA/ABC.

Dianne Fahselt, Chair

Scientific Writing for Graduate Students. A Manual in the Teaching of Scientific Writing, edited by F. Peter Woodford. 1968. Council of Biology Editors, Bethesda, Maryland. 190 pp. $9.95 U.S. (Reprinted 1983).

If it seems strange to review a book that is 17 years old, it is!

I suspect that every generation of scientists looks askance at the seeming illiteracy of the new generation of graduate students. As we age, we all bring less than perfect recall to the problems encountered in writing our first scientific paper. It was, of course, difficult but we mastered it and, clearly, the new generation is less capable and certainly less well taught than we were!

Even a short spell as an Editor is enought to show that illiteracy does not respect professional status. The path to improvement is an active and agressive "willingness to learn" plus continuous, conscientious effort.

All of the many books that I have seen raise similar issues. I suspect that each of us has our favourite, but I also suspect that few of us have actually studied even our favourite resource with any diligence. Most of us seem to view writing a paper as a pain rather than the final, creative step in pursuit of a particular research project. It is surprising how often I read a reviewer's comments on a submitted manuscript that say in effect, "I cannot tell what the author means".

It is perhaps not an accident that the CBE publication Scientific Writing for Graduate Students was published in 1968 and has not been revised. Its message and clarity are not likely to "date" until we eliminate the scientific paper as a means of communication.

The premise is that we can and should be taught to write a paper, if only to ensure that the research being reported is presented in the best possible light. Where better to begin than at the start of a scientific career? The book is presented in the form of a course. The student is taught to write scientific thoughts in simple yet sophisticated form. All the major questions are asked, plus a host of others. The examples are real and focus on the point under discussion. If writers of grant proposals and submitted manuscripts met the standards presented in this book, serving on NSERC grant committees and journal editorial boards would become a real pleasure. This book should be on every biologist's shelf.

Maybe, it should be a departmental admission gift to every student entering the graduate program.

Iain E.P. Taylor
Dept. of Botany
Univ. of British Columbia

The Flora of Manitoulin Island by J.K. Morton and Joan M. Venn. 1984. 2nd ed. University of Waterloo Biology Series No. 28. Department of Biology, University of Waterloo, Waterloo, Ont. 182 + 106 pp., incl. 124 col. illustr. and 1053 maps. $20.00 Can. (post free).

Manitoulin Island is the largest freshwater island in the world, and nearly one-fourth of all the vascular plant species in Canada are found there. This new book does justice to the island's flora. Overall, it is an impressively presented, thorough work, greatly enlarged and improved since the 1977 first edition of 62 pp.

The first 35 pages of introduction includes sections on Geology, Climate, History of Botanical Exploration, The Vegetation and Plant Communities, Conservation, Plant Distribution, Composition and Origin of the Flora, Statistics of the Flora, Arrangement of the Flora, Conspectus of the Families in the Manitoulin Flora, Nomenclature and Taxonomy, Recording and Mapping, Excluded Records, Acknowledgements and a Postscript. There is a map of Manitoulin and the many adjacent smaller islands.

In the main body of the text, 1221 taxa are discussed. Each entry includes at least a line or two on habitat, degree of rarity and time of flowering, or up to several paragraphs comparing the taxon to related taxa or discussing nomenclatural problems in some of the difficult taxa or complexes. There are keys to some of the more difficult and larger genera, including *Salix*, *Crataegus* and *Juncus*.

The 124 colour plates are of excellent quality and pleasingly presented with narrow white borders against a black background. A majority of these plates are close-ups of flowers.

There might be some confusion for a beginning student using the pictures for identification. For instance, the flowers of *Mitella nuda* appear to be the same size as those of *Sarracenia purpurea*. It would also have been nice for the beginner to have names accompanying each photograph (there is room on the plates for both scientific and common names below each photograph).

There is an up-to-date literature section. The pink-paged index is easy to find. The first appendix gives 20 pages of floras of 53 of the smaller adjacent islands. The second appendix gives computer-drawn distributional maps of 1051 taxa.

This is certainly one of the most impressive local floras done in North America and is a must for students of the eastern flora.

Gerald B. Straley
Botanical Garden
Univ. of British Columbia

Chromosomnye chisla tsvetkovykh rastenij Sibiri i Dalnogo Vostoka [Chromosome Numbers of Flowering Plants of Siberia and the Far East] by R.E. Krogulevich and T.S. Rostovceva. 1984. Izdavatel'stvo Nauka, Sibirskoye otdeleniye, Novosibirsk. 286 pp.

This book presents the chromosome numbers of 2240 species of flowering plants of Siberia and the Far East (the official Russian definition of Siberia does not include the drainage systems running to the Pacific Ocean. It is based mainly on data published in Russian literature from 1936 to 1981 (101 references), but does also include previously unpublished material.

Data are ordered by family using the Englerian system. Genera within families and species within genera are ordered alphabetically. Somatic chromosome numbers are given regardless of whether the actual count was obtained from mitotic or meiotic divisions. The locality and literature references are given for each count.

Taxa are listed under the names used in the

original publications (with the exception of the genus *Gastrolychnis* = *Melandrium*). Since this compilation covers a span of almost fifty years, it is likely that the various authors applied the same names to different taxa. But the nomenclature is relatively uniform because most of the references were published after 1960 (it was a mortal sin in the U.S.S.R. to believe in chromosomes before then).

Immediately upon opening the book, I noticed that it lacked a reference (Probatova, N.S. & A.P. Sokolovskaya, Bot. Zhurnal 66:1584-1594, 1981), and I suspect that there may be other omissions. Despite this, the publication will undoubtedly be useful as a key to information on chromosome counts for the Russian parts of Asia.

Adolf Ceska
Botany Division
B.C. Prov. Museum

Giftpflanzen - Pflanzengifte. Vorkommen - Wirkung - Therapie by L. Roth, M. Daunderer and K. Kormann. 1984. Ecomed Verlagsgesellschaft mbH, Landsberg, München. ca. $55.00

As a btoanist, your friends and neighbours or the poison control centre may call on you at any time to provide information on poisonous plants. Usually your answers to their questions have to be quick and accurate. Doctors' decisions often depend on your knowledge. In moments like these, you may curse the lack of a comprehensive reference on poisonous plants in North America.

This book is an excellent reference which deals with this problem. Although it was published in Germany and concentrates mainly on plants found in central Europe, it is also a very useful source of information on many species native to or cultivated in Canada.

The book is divided into three major parts. The first is an alphabetic list of plant species ordered according to Latin names. The following information if given for each species: common names in German, English, French and Italian; family; distribution; a short description; name of drug obtained from the plant; poisonous parts; main active substances; symptoms; use in folk medicine; an estimate of toxicity; literature; and therapy (both first aid and clinical). There are colour photo-raphs of most of the plants. The second part of the book presents similar information on poisonous mushrooms. It also contains keys for the identification of spores along with numerous illustrations. The third major part lists chemical compounds, gives their descriptions, formulae and further references, and discusses toxicology and therapy. A large section of this part is devoted to the description of analytical techniques, especially thin-layer chromatography.

I cannot praise this book enough for the wealth of information it contains. My only disappointment was in its strange system of pagination. Each letter of the alphabet is considered to be a separate section and the pages within a section are numbered independently of any other. The chemical part deals with plant poisons but does not give a list of species in which a poison occurs so that one has to turn to the index and then struggle with the complicated pagination. It is possible, most of the time, to find what you want without paying attention to page numbers.

Adolf Ceska
Botany Division
B.C. Prov. Museum

Bestimmungsschlüssel zur Flora der Schweiz und angrenzender Gebiete [Identification Key to the Flora of Switzerland and Neighbouring Regions] by H.E. Hess, E. Landolt and R. Hirzel. 1984. Birkhäuser Verlag, Basel-Boston-Stuttgart. 657 pp. DM 58.-

European botanists were delighted when the three volume Flora der Schweiz by Hess, Landolt and Hirzel appeared during the years 1967-1972. The volumes' unusual format, typographical beauty, and unmatchable drawings enhanced the vast amount of information on plant species of the phytogeographically most important area of Central Europe.

Obviously the Flora der Schweiz was not meant to be carried into the field. For field use, the authors have collected the identification keys and illustrations of the more common species and published them in a pocket book format.

Like the full Flora, this book also demonstrates the authors' innovative approach. The main part - the keys - is in indented format which, to save space, is printed in landscape orientation, i.e. the print beginning at the bottom of the page and running up. The page is divided into three "windows". The window on the left is 4 cm wide and is reserved for the illustrations. The middle window is 11 cm wide and is used for the body of the key. The right hand window is also 4 cm wide and is used for the species names and numbers (these refer to the illustrations). A dictionary of morphological terms and an index of names follow the keys.

Hess, Landolt and Hirzel exhibit the same high standards in this book as they showed in the Flora.

Adolf Ceska
Botany Division
B.C. Prov. Museum

BOOKS NOTED

AMA Handbook of Poisonous and Injurious Plants. 1985. Published by the American Medical Association. 435 pp. Softcover. $18.95 US

A guide to the harmful effects of important native and cultivated plants of the United States, Canada, northern Mexico and the Caribbean. The book is divided into sections covering systemic plant poisoning, plant dermatitis and mushroom poisoning. Each description includes botanical name; common name(s) in English, Canadian and Haitian French, Spanish, and Hawaiian; description; gepgraphic distribution; toxic parts; symptoms of contact of ingestion; and required medical care. There are 437 colour photographs to aid identification and an index to botanical and common names.

The book may be ordered from bookstores or by sending $18.95 US + $2.50 UPS delivery & handling charges to Chicago Review Press, 213 West Institute Place, Chicago, IL 60610.

POSITION WANTED

Looking for an academic/research position: M.Sc. Botany (Plant Physiology), Ph.D. Plant Ecology (post-fire vegetation regeneration). University teaching and post-doctorial experience in fire ecology, general botany and chemical interaction between plants. More than 20 publications.

Contact: Dr. Azim U. Mallik, Visiting Research Scientist (NSERC), Newfoundland Forest Research Centre, P.O. Box 6028, St. John's, Nfld AiC 5X8

POSITIONS AVAILABLE

Agriculture Canada Research Station, Fredericton, New Brunswick

Visiting Fellowship in Biotechnology — The Agriculture Canada Research Station in Fredericton has a position for a Visiting Fellowship in Biotechnology. The position is for one year, with the possibility of renewal, and is open immediately. The incumbent is to work on regeneration studies using the potato palnt.

Qualifications: a Ph.D. with a strong background in Plant Physiology and Histology. A knowledge of Plant Breeding and Genetics is also desirable.

Address applications to: Dr. Janet E.A. Seabrook, Agriculture Canada Research Station, P.O. Box 20280, Fredericton, N.B. E3B 4Z7

University of Saskatchewan, Saskatoon, Saskatchewan

Post-doctoral Fellowship — A post-doctoral position is available for an investigation of protein and isoenzyme patterns in normal and mutant flower development. The candidate should have a Ph.D. in Botany/Plant Sciences with a strong background in Biochemistry and Plant Development.

The position is available immediately for an initial one-year term with a possibility of renewal for a second year. Minimum salary is $12,420 (NSERC rate).

Interested candidates should send a curriculum vitae, reprints of publications and at least two letters of recommendation to: Dr. V.K. Sawhney, Department of Biology, University of Saskatchewan, Saskatoon, Sask. S7N 0W0

University of Manitoba, Winnipeg, Manitoba

Graduate Student Stipend, Diatom Morphogenesis — A stipend of $10,560 per year is available for two years for a graduate student interested in working on diatom morphogenesis, with the possibility of continuation. This NSERC-supported research is aimed at understanding the molecular basis of diatom shell patterns. A strong background in physical and biochemistry, with some knowledge of phycology, would be an asset.

The successful applicant must qualify for admission to either the Department of Botany or the Interdisciplinary Program at either the M.Sc. or Ph.D. level.

Address applications to: Dr. Richard Gordon, Department of Botany, University of Manitoba, Winnipeg, Man R3T 2N2

PERSONALIA

Dr. Vladimir Krajina, Emeritus Professor of Botany at the University of British Columbia, has received some more honours. Vladimir was elected a Fellow of the Linnean Society of London on February 14, 1985. A symposium in honour of Vladimir's 80th birthday was held during the Canadian Congress of Biology, June 23-28, 1985. The symposium, "Community Organization and Ecosystem Conservation: A Contemporary Synthesis", was organized by *Dr. Mohan K. Wali*, one of Vladimir's ex-students. A number of Vladimir's ex-graduate students attended both the symposium and a genteel "roast" that was held on the previous evening. Vladimir has requested that no letters of congratulations be sent to him as he does not have time to answer them. So ..... congratulations, Vladimir, on both these honours from CBA/ABC members!

Dr. Anthony D.M. Glass, Department of Botany, University of British Columbia, has been appointed Head of the Department, effective April 1, 1985. Tony is a plant physiologist.

Dr. Roy L. Taylor, Director of The Botanical Garden, University of British Columbia, has accepted a position as Director of the Chicago Botanical Garden, Evanston, IL, and President and Chief Executive Officer of the Chicago Horticultural Society which runs the Garden. Roy is a founding member and past President of CBA/ABC, and has been very active in the botanical and horticultural communities in both Canada and the United States. His wife, *Dr. Janet R. Stein*, has taken early retirement from the Department of Botany at UBC to accompany Roy to Evanston. Roy takes up his new position on September 1, 1985.

Dr. J. Derek Bewley, presently of the Department of Biology at the University of Calgary, has been appointed Head of the Department of Botany at the University of Guelph. Dr. Bewley is a plant physiologist.

Dr. Guy R. Brassard has been Acting Head of the Biology Department, Memorial University of Newfoundland, since September 1984. He will relinquish the position in October 1985 upon the appointment of the new Head.

Dr. G. Robin South has been appointed Executive Director of the Huntsman Laboratory, St. Andrews, N.B., as of September 1, 1985. Robin will retain his position as Professor in the Department of Biology, Memorial University of Newfoundland, during his term as Director of the marine laboratory.

René J. Belland successfully defended his Ph.D. dissertation at Memorial University of Newfoundland in April 1985.

Dr. John Morton of the Biology Department, University of Waterloo, told the Editor that the University has now given land in perpetuity to be used for a Botanical Garden. He is now involved in raising money for the development and support of the Garden.

Mrs. Mary I. Moore was named a V.I.P. subscriber for the National Arts Centre, Ottawa, production of You Can't Take It With You. This was the result of a computer draw from the list of current series subscriber. Mary received a floral arrangement, dinner for two in a restaurant, and limousine service.

WILDFLOWER REDISCOVERY AWARDS

The American Horticultural Society has presented the first Wildflower Rediscovery Awards to 5 individuals who have discovered new populations of extremely rare species of wildflowers.

Bob Zaremba, a botanist for the New York Heritage Program, discovered one small and one large population (amounting to 1000-2000 additional plants) of *Agalinis acuta*, Sandplain Gerardia, on Long Island. This doubles the known population of s species feared extinct in 1978.

Rodney Bartgis, botanist at The Nature Conservancy West Virginia Field Office, rediscovered *Trifolium stoloniferum* (Running Buffalo Clover) in West Virginia. Twenty-five plants in 2 sites are now known for this species which had not been seen in the wild since 1940.

Larry Morse, National Research Associate at The Nature Conservancy, and Steve Croy, Virginia Natural Diversity Program, located a population fo the mat-forming *Bacopa stragula* (Water Hyssop) in Virginia in 1984. Two other populations have since been discovered to bring the total known population to about 100 plants.

Jimmy Kagan, Oregon Natural Heritage Program, rediscovered *Pleuropogon oregonus*, Oregon Semaphore Grass (not seen after 1901 until 1982); *Astragalus applegattii*, Applegate's Milk-vetch, in 1983 (not seen since 1927); and *Plagiobothrys hirtus*, Rough Allocarya, in 1983 (not seen since 1939.

All received certificates and rewards from the AHS Wildflower Rediscovery Project Fund.

FORTHCOMING MEETINGS

Nineteenth Meeting on Numerical Taxonomy, October 4-6, 1985, Université de Montréal.

For further information, contact: David Sankoff, Centre de recherches mathématiques, Université de Montréal, C.P. 6128, Montréal, Qué H3C 3J7.

Thirty-Second Annual Systematics Symposium, October 18-19, 1985, Missouri Botanical Garden, St. Louis.

The title of this year's symposium is "The Biology of Epiphytes". The registration fee is $30 U.S. (students $25 U.S.).

For further information, contact: Systematics Symposium, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166.

DID YOU KNOW? — OR THIS MONTH'S TRIVIA!

Steer manure is commonly used as a fertilizer on gardens -- but do refuse any offers of elephant manure that may be made!

A circus visited an English town, complaints were made about the smell from the big top and the local gardeners were offered a job lot of elephant manure as a "peace-maker". Six months later, many plants have died because the manure was too powerful and scorched the roots. Even trees have succumbed.

Do not say that you were not warned!

FUTURE MEETINGS OF CBA/ABC

1986 - Sudbury, Ont June 22-26

1987 - Montreal, Que June 14-18

1988 - Victoria, B.C., date not yet known

1989 - Toronto, Ont, date not yet known
Joint meeting with Botanical Society of America

1990 - 2nd Canadian Congress of Biology
Place and date not yet certain

1991 - Place and date not yet certain

ACKNOWLEDGEMENT

CBA/ABC wishes to acknowledge with many thanks the donation made to the Annual Meeting by John C. Ayers, President, Herbarium Supply Company, P.O. Box 883003, San Francisco, CA 94188.

YOU MAY BE INTERESTED TO KNOW...

A Glossary of Botanic Terms by B.D. Jackson. 1928, 4th edition.

What is apparently the last remaining stock of the Duckworth's reprint of the above book has been acquired by Harry Lubrecht of Lubrecht & Cramer Ltd. The glossary is a valuable supplement to W.T. Stearn's Botanical Latin as it contains many out-dated terms that are not now found in any other glossary.

Copies are available for $19.00 US post paid from Harry Lubrecht, Lubrecht & Cramer Ltd., RD 1, Box 244, Forestburgh, N.Y. 12777.

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

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

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

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