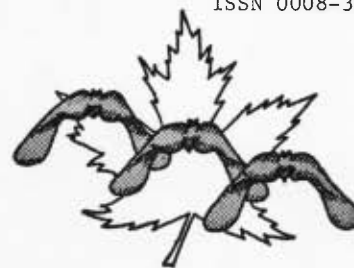


BULLETIN

L'ASSOCIATION BOTANIQUE DU CANADA



October 1975

Volume 8 Number 4

Waterloo

BEP 1975

The tenth annual meeting of the Canadian Botanical Association was held 18 Aug - 22 Aug at Saskatoon on the impressive campus of the University of Saskatchewan, with its many elms. About 60 members attended meetings held jointly with the Entomological Society of Canada and the Canadian Phytopathological Society. Each day commenced with a plenary session with content sufficient to sustain and nurture the participants. These sessions were followed by submitted papers that dealt with the topic introduced by the keynote speaker of the plenary session. It was encouraging to hear that interdisciplinary work at the developmental and ecological levels is being conducted in Canada.

The first plenary session was an engrossing presentation by D.H. Janzen. His address was an enjoyable feast of material covered in his papers and recent evidence to substantiate the premise that insect and mammalian herbivores dramatically influence the dispersal pattern of propagules of tropical plants; hence, these herbivores greatly influence the demography of the plant populations. Janzen's talk had the desired effect of encouraging an immediate reconsideration of the concepts held separately by botanists and zoologists (as evidenced by several coffee-break conversations). There followed concurrent sessions of submitted papers: ecological interactions, plant disease physiology, crop pathology, and plant morphogenesis.

At the second plenary session three keynote speakers considered various aspects of the co-evolution between organisms that occupy different trophic levels. They were: E.E. Leppik (classification of rust fungi, host plants, and their insects), H. Zwolfer (phytophagous insects, their enemies, and plants), and P.G. Kevan (pollination ecology). Leppik reiterated the usefulness of the Fischer-Dietel-Gaumann classification system of rust fungi, as one not fully appreciated by American workers. The concurrent sessions to follow were taxonomy, insect development, mycology, and plant disease physiology.

A special awards session was held in the afternoon as the Canadian Botanical Association presented its Lawson Medal to Dr. R.F. Cain to recognize his achievements in mycology.

Two days of full and vigorous meetings were punctuated by a joint banquet kindly provided by the Province of Saskatchewan at the Western Development Museum. Steam-powered tractors delighted many as they rode with the engineer. Perhaps of all the talks heard during the conference Mr. Breen's "One for the road" was understood regardless of one's biological discipline.

The study of plant galls, especially their classification in terms of Kuster's earlier treatise, was reviewed at length by keynote speaker J. Meyer. Much of Meyer's concepts are apparently included in two texts to be published shortly. Aspects of gall formers, the variation in gall shape, and the impact of the galls on host plants were then considered in a number of submitted papers.

Several members went on an afternoon field trip to observe a mixed grassland relict, aspen bluff, and prairie slough (with hundreds of waterfowl!) and a section of riparian woodland. A barbecue at the Forestry Farm Park was an enjoyable conclusion to the excursion.

The last two keynote speakers, K. Maramorosch and R.J. Campana, provided evidence that progress in a study of plant diseases and insect vectors (indeed, of any research) requires serendipity, humour, and perseverance. Even after decades of study many answers to the well-known Dutch elm disease remain to be discovered. Several concurrent sessions concluded the meetings: ionizing radiation as an environmental stress (a series of reports from people at the Atomic Energy of Canada facility at Pinawa, Manitoba), phytophagous insects, phycology, virology, and plant-chemical interactions.

One of the disappointments of the majority of the plenary sessions was the lack of time for sufficient discussion. Chairpersons must warn speakers (even keynote speakers!) to keep within the time allocated rather than deprive the audience of a

discussion. Also, as leaders of a session, they should come armed with a couple of lead-off questions should the audience not respond quickly.

The Photo Salon, with submissions of prints and slides, was a worthwhile experience that should be continued at our annual meetings.

The format of the joint meeting, with daily plenary sessions and a minimum of conflict of interest among concurrent sessions, was successful in bringing together members of the three societies. Congratulations to the Organizing Committee.

Wayne Hawthorn.

PRESIDENTIAL ADDRESS AND PRESENTATION OF A GEORGE LAWSON MEDAL

These meetings at Saskatoon are a special occasion for the CBA, for this year our Association is 10 years old. The first meeting of the CBA took place at Carleton University in May 1965. The birth of our Association in that year was preceeded by several years of discussion amongst Canadian botanists guided and encouraged by our first President Dr. Ludwig, with the Royal Society of Canada acting as a catalytic agent. During the ensuing 10 years the Association has held meetings, either on its own or, as on this occasion in conjunction with other sister societies, in many parts of Canada and also outside the borders of this country. In 1966 we met in Vancouver; 1967 in Ottawa; 1968 in Thunder Bay; 1969 at Seattle on the occasion of the 11th International Botanical Congress; 1970 in Quebec City; 1971 in Edmonton; 1972 in Halifax, Nova Scotia; 1973 in London, Ontario and last year at Tempe, Arizona in association with the AIBS meetings.

These annual meetings have become the focal point of our Association, providing the stimulus of discussion with our fellow botanists and with others in related disciplines, and also providing the interchange of ideas which is so fruitful in any scientific endeavour. Usually our meetings are arranged around a major symposium or symposia on carefully selected themes. Next year for instance we are meeting at Bishop's University in Lennoxville, Quebec and our theme will be Natural Areas -- a theme with wide ramifications in many areas of botany. In the following year, 1977 we plan to meet in Winnipeg and in 1978 in St. John's, Newfoundland.

One of the pleasant tasks and privileges which befalls the President of the CBA is the presentation of the George Lawson Medals. The purpose of these awards is to provide a collective and formal expression of the admiration of botanists in Canada, for the excellence of the contribution of individuals to Canadian botany. Any botanist working in Canada, or having spent a major part of his career in Canada is eligible. The award was founded in 1968. In its name it commemorates George Lawson, the first professional botanist appointed in Canada. Though born in Scotland, Lawson spent the greater part of his career in Canada at Dalhousie University in Halifax, Nova Scotia. He is credited with founding the first botanical society in Canada and establishing the first botanic garden in

this country -- both at Queen's University at Kingston where he spent the first few years of his career in Canada as Professor of Chemistry and Natural History -- a position he assumed in 1858. Lawson's major interests and activities were in agriculture and economic botany and this is reflected in some of the offices he held. Amongst others he edited the Nova Scotia Journal of Agriculture for 12 years, the Crop Reports of Nova Scotia for 6 years, and the Annual Report of the Secretary of Agriculture for 30 years. During the last 10 years of his life he was Secretary for Agriculture in Nova Scotia. He published about 100 botanical papers as well as others on zoology and chemistry. It is indeed strange that the name of such a prodigious and distinguished worker should have been all but forgotten in this country; but such was the case until the creation by the CBA of this award bearing his name.

There are two categories for awarding the Lawson Medals. The first is for an outstanding contribution to botanical knowledge -- a book, a major paper or series of papers. The second is for the cumulative contribution by a senior investigator, teacher or administrator which has notably advanced the study of botany in Canada.

This year the Awards Committee has recommended the award of a medal in the category of a lifetime's contribution to botany in Canada. During the past few years, since the creation of the Lawson Medal Award, the CBA has been privileged to honour a number of outstanding workers in several branches of botany. This afternoon it is my privilege and pleasure to add another distinguished name to the list of recipients of the Lawson Medals -- the name is that of Dr. R.F. Cain.

Roy Franklin Cain was born in Paris, and educated in Norwich, Ontario. He attended the University of Toronto, where he was an outstanding student, obtaining a total of 8 scholarships and medals. He was awarded a BA in 1930, and was a gold medal winner of that year. The MA and Ph.D followed in quick succession in 1931 and 1933. His doctoral thesis, published in 1934 and entitled "Studies on Coprophilous Sphaeriales in Ontario" is still widely used and referred to by mycologists, not only in Canada, but in many other parts of the world. Dr. Cain joined the faculty of the University of Toronto immediately after receiving his Ph.D and has served them loyally, diligently and with outstanding ability in the subsequent years, to a well earned retirement, which he is just now embarking upon. During these 43 years Dr. Cain has continued and enhanced the reputation of the U. of T. as a training ground for mycologists, producing 16 M.Sc. and 19 Ph.D. graduates. Many of these students who blossomed under his guidance have themselves attained distinction in their chosen field, and are now actively engaged in University teaching, or in government research departments, or industry, both in Canada and in many other countries of the world.

As a research worker Dr. Cain is a recognized world authority on the coprophilous fungi. His research on the Ascomycetes spans 46 years and makes up a significant contribution to Canadian Mycology and Plant Pathology. He has published prolifically, but in so doing he has maintained a high standard

of publication -- a standard which should be emulated by all of us. His versatility and breadth of knowledge of the fungi are apparent in the invaluable contributions he has made to our knowledge of twig and die back fungi, the snow molds and soil fungi. His knowledge and expertise are not limited to the fungi but extend to the Bryophytes and lichens. One of the main objectives of his studies has been directed towards a better understanding of the phylogeny and evolution of the Ascomycetes and of the fungi in general. His work on this culminated in a provocative and now classical Presidential address delivered in 1970 to the Mycological Society of America -- an address entitled "Evolution of Fungi" in which he ably expounded his views developed from a lifetime's research and study.

Besides his contributions as a teacher and research worker, Dr. Cain has been Curator of the Cryptogamic Herbarium at the University of Toronto since 1933. Beginning with a limited and negligible collection of about 500 specimens in 1930, that herbarium now numbers over a quarter of a million specimens of fungi, lichens and mosses. This rapid expansion can be mainly attributed to Dr. Cain an -- an active field naturalist, a lover of the great outdoors and a prodigious and meticulous collector. He has travelled and collected extensively throughout Ontario and in all of the provinces and territories of Canada, as well as in most states of the U.S., in Mexico, Venezuela and parts of Europe and Africa. In addition his able and energetic curatorship has secured for the herbarium many other valuable collections. The herbarium is now an outstanding one; known internationally for its excellence. It is extensively used especially by workers throughout Canada.

Dr. Cain's breadth of knowledge, wide experience and personal researches have earned him many honours. Amongst these may be mentioned his Presidency of the American Bryological Society in 1960 and of the Mycological Society of America in 1970 -- the first time a native born Canadian has held this distinction.

One other feature of Dr. Cain's career deserves mention. Throughout the years he has always maintained an "open house" to all who sought his mycological and cryptogamic expertise. His laboratory is a centre for the amateur mycologist, the mushroom collector and others. The interest and enthusiasm which he has stimulated in these people has been a major factor in the organization of an Amateur Mushroom Society in Toronto -- a society which has over 50 enthusiasts on its books.

Dr. Cain through his research activities, his influence on students and his rapport with the public will leave his mark on Canadian Botany for many years to come. It is fitting at the climax of his career, as he enters a retirement which we hope will be long, active and enjoyable, that we should present to Dr. Cain our most distinguished award of a Lawson Medal -- Dr. Cain will you please come forward and receive this award.

Roy Franklin Cain -- Professor, Teacher, Research Scholar, Curator and Field Botanist -- these and your many other attributes we recognize in presenting you with this award.

BEP PHOTO SALON AWARDS

Saskatoon, Saskatchewan Aug 18-21, 1975

Botanical Section

Prints, Macro Photography

- 1st, and Best in Salon: Apothecia -- John Dueck, Saskatoon, Saskatchewan.
- 2nd: Encalypta vulgaris Hedw. -- Adolf Ceska, Victoria, British Columbia.
- 3rd: Ginkgo biloba, Inflorescence male -- Dennis Barabe, Montreal, P.Q.

Light Microscopy Prints

- 1st: Asci -- Ascobolus -- George L. Barron, Guelph, Ontario.
- 2nd: Hyphae of Rhizopus -- George L. Barron, Guelph, Ontario.
- 3rd: Aspergillus -- George L. Barron, Guelph, Ontario.

Electron Microscopy Prints

- 1st: Pollen of Parthenocissus incerta (X 6650, SEM) -- R.J. Adams and J.K. Morton, Waterloo, Ontario.
- 2nd: Pollen of Magnolia macrophylla (X 3850, SEM) -- R.J. Adams and J.K. Morton, Waterloo, Ontario.
- 3rd: Douglas fir, vegetative apex at time of bud differentiation in July (X 370, SEM, unfixed) -- John N. Owens, Victoria, British Columbia.

Slides

- 1st: Cardinal flower -- B.T. Aniskowicz, Ottawa, Ontario.
- 2nd: Ram's head ladyslipper -- B.T. Aniskowicz, Ottawa, Ontario.
- 3rd: Fall scene -- D.L. Schuder, West Lafayette, Indiana.

EXECUTIVE COMMITTEE C.B.A./A.B.C. 1975-1976

President: M.E. Elliott, Biosystematics Research Institute, Agriculture Canada, Ottawa, Ontario K1A 0C6.

Past-President: J.K. Morton, Department of Biology, University of Waterloo, Waterloo, Ontario N2L 3G1.

Vice-President: J.M. Stewart, Department of Botany, University of Manitoba, Winnipeg, Manitoba R3T 2N2.

President-elect: W.N. Stewart, Department of Botany, University of Alberta, Edmonton, Alberta T6G 2E1.

Secretary: C.J. Bird, Atlantic Regional Laboratory, NRCC, 1411 Oxford St., Halifax, Nova Scotia N1G 2W1.

Treasurer: J.F. Gerrath, Department of Botany and Genetics, University of Guelph, Guelph, Ontario N1G 2W1.

Directors:

J. Dainty, Department of Botany, University of Toronto, Toronto, Ontario M5S 1A1.

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P. Morisset, Département de Biologie, Université Laval, Quebec, P.Q. G1K 7P4.

J.N. Owens, Department of Biology, University of Victoria, Victoria, British Columbia V8W 2Y2.

J.G. Packer, Department of Botany, University of Alberta, Edmonton, Alberta T6G 2E1.

P. Roberts-Pichette, 430 Besserer Street, Ottawa, Ontario K1N 6C1.

Editor of Bulletin: J.K. Morton, Department of Biology, University of Waterloo, Waterloo, Ontario N2L 3G1.

STATEMENT OF FINANCIAL STANDING 1974/75 OF THE CBA/ABC

| | | |
|---------------|-------------|----------------|
| <u>Assets</u> | | |
| Balance: | Savings | 1500.00 |
| | Chequing | 2298.72 |
| | Net Balance | <u>3798.72</u> |

| | | |
|-----------------|--------------|----------------|
| <u>Receipts</u> | | |
| Membership: | Reg. | 3062.86 |
| | Stud. | 225.00 |
| | advance | 84.98 |
| Misc. | | 356.47 |
| Can. J. Bot. | | 2008.19 |
| | Net Receipts | <u>5737.50</u> |

| | | |
|---------------------|------------------|----------------|
| <u>Expenditures</u> | | |
| | Bulletin | 904.42 |
| | C.J.B. | 1968.00 |
| | B.C.C. | 615.00 |
| | Travel | 1825.66 |
| | Post./Stany. | 241.66 |
| | Bank Cgs. | 19.34 |
| | Misc. | 139.66 |
| | Medal/engr. | 379.80 |
| | BEP meeting | 500.00 |
| | Net Expenditures | <u>6593.54</u> |

| | | |
|--------------------|--|-----------------|
| <u>Summary</u> | | |
| Balance last audit | | |
| 22 May '74 | | 4654.76 |
| Receipts | | 5737.50 |
| | | <u>10392.26</u> |

| | | |
|--------------|--|-----------------|
| Balance | | |
| 5 June '75 | | 3798.72 |
| Expenditures | | 6593.54 |
| | | <u>10392.26</u> |

Gary S. Hicks,
Treasurer.

We have examined the relevant documents and to the best of our knowledge this represents an accurate statement of the financial status of the CBA - ABC.

Auditors.
Sister Mary Lua Gavin
M.J. Harvey

WHITHER THE CBA/ABC?

Two matters were discussed in the corridors, cafeterias and bars at the Saskatoon meetings and these deserve much greater consideration and deliberation by our membership, for they could greatly affect the future and well being of our Association. One is the viability and value of the Sections, and the other is whether it would be better to hold our meetings every other year instead of annually.

The future of our Sections has come into question during the last year or two because there has been a decreasing interest shown in them by members attending the annual meetings, and it has become difficult to get a sufficient attendance and interest at the sectional business meetings to elect officers to run the affairs of the Sections during the year. In fact at the moment it is probably true to say that the only Section which is really active and viable is the Ecology Section.

It may be that the Sections have, for the most part, outgrown their usefulness and that the Association itself provides the forum and focus which you, our members require. If this is the case it is an interesting development, for when the CBA/ABC was founded 10 years ago it was created as a loose amalgum of several discipline groups which became strong and active Sections in the association. Whatever the reason for the decline of several of our Sections it cannot be construed that the same malaise has infected the Association as a whole, for our membership remains relatively constant (400-450) and our annual meetings continue to be successful, though they have never attracted more than a fraction of our total membership -- plus or minus 20% depending on the proximity of the meeting to the major population centres of Canada.

The other question which became one of hot debate was whether our present system of holding meetings each year should be changed to holding them on alternate years. The rationale for this appears to be twofold. Firstly it would lessen the problem of possible clashes with other meetings, such as happened this year (AIBS and Pacific Science Conference) and reduce the problem faced by some of our members of choosing each year, for financial or other reasons, which meetings to attend. The second reason was that it was contended by some that by holding our meetings in alternate years we would attract a larger attendance from our membership. Whether this is true is debatable, for it depends on whether it is the same 20% of our membership which attends the meetings each year or a different 20%. We appear to have no data on this. A real danger of holding meetings every other year is that the activities of, and interest in, the CBA/ABC may lose continuity and momentum and as a result the Association would suffer rather than benefit.

Both these matters will be discussed by your Executive Committee during the coming year, but we need to know more about the opinions of our membership at large, not just those who happened to be at Saskatoon. What are your views? Please discuss these matters amongst your colleagues; talk to members of the Executive Committee if you get a chance; write to our President, or write to the Editor so that we can air these matters in the Bulletin. In particular we would like to hear from those of our members who rarely attend our meetings. What do you get out of your membership of the CBA/ABC -- why are you a member? What does the CBA/ABC do and provide which you want and approve of? What do you think the Association should and could be doing to make it of more value and interest to you? Please write and tell us!

XII INTERNATIONAL BOTANICAL CONGRESS

The XII International Botanical Congress, or Colloquia botanicorum as our attractive lapel pins said, was held in Leningrad in the U.S.S.R. between July 2nd and July 24th. Approximately 80 Canadians attended, half of them travelling with the CBA/ABC tour.

To speak of the Congress it is necessary to speak also of the city of Leningrad, for the two were inextricably intertwined. Unlike the XI International Congress, which took place within the environs of a University

where most of the delegates were in residence and ate in a common cafeteria, at this meeting we resided and ate in many hotels throughout the city. Shuttle buses conveyed us from our hotels to the meetings.

Some 5000 delegates are reported to have attended the Congress. About 2000 came from the U.S.S.R. and the rest from other countries around the world. Another 2000 visitors came with the delegates. Headquarters for registration and other activities was in the Tauride Palace with its beautiful white and gold chandeliered main hall and its cool lakeside garden at the back. Meetings were held here and a half mile away in the House of Political Education. The organizing committee had to deal with a problem that previous congresses have not had - there were two official languages, Russian and English, which meant that every paper had to be translated. The problem was solved in several ways, but despite a very large and very efficient translating staff of Russian scientists and teachers, communication was not always easy.

Meetings were organized around an opening and closing plenary session plus a general symposium on the problem of "Conservation of the Plant World". These were held in the Otktyabrskaya (Oktyabrsky - both spellings appear), a large modern concert hall equipped for simultaneous translation in several languages. The wide variety of symposia, with invited papers, were held in smaller rooms or auditoriums with simultaneous translation in the two official languages. Most problems of communication occurred during the discussion periods of these symposia or at sessions of contributed papers. In the latter case simultaneous translation was not available. A summary in the second language was given before or after, or the translation was done by paragraphs. One Russian speaker deserves special mention - he projected a copy of his paper in English. There was not only a language, but often a hearing problem that could not have been foreseen. Rooms for contributed papers were often crowded and traffic noises could be heard through the windows, open because of the beautiful weather. Delegates moved in and out freely, often in front of the speakers, and there was a surprising amount of talk during the papers. The whole created what must at times have been an intolerable situation for the speakers as well as a difficult one for the audience. A P.A. system, not necessary in such rooms under normal conditions, would have ensured that speakers and translators dominated the other distractions. Where sessions were small, delegates reported little difficulty. The evenings were available for special demonstrations and discussion.

Scientific tours were arranged to the Komarov Botanical Institute and Gardens, to the Institute of Biology, the Timiriazev Institute of Plant Physiology and to the Kirov Forest Academy with its Dendrology Garden. These popular tours were quickly expanded to meet the requests of the visitors. Several Institutes had extensive displays with English labels and a variety of translated books or papers. Very successful private tours and demonstrations were also arranged between delegates and hosts to discuss mutual problems.

General tours of the city were available free of charge to delegates and their families

through Intourist. Here we came to appreciate the beauty and richness of the former Russian capital. The city, founded early in the 18th century by Peter the Great, Czar and scientist, was partially destroyed during the last war in a 900 day siege. Today buildings have been restored to their former magnificence, the delicate pastel colors often high-lighted with carvings, pillars and statues in white or gold. To see Petrovoretz with nearly 150 of its individually designed fountains and waterfalls back in operation and ornamented with large golden statues, it is difficult to believe that this summer palace on the Gulf of Finland was a shell in 1944. Since the city is divided by the Neva River and crossed by many canals, transportation is often by boat. Many of us had a ride on the hydrofoil ferries. Some saw an opera or a full length ballet at the Kirov Theatre; others a circus or a performance of folk music and dancing. As we returned to our hotels near midnight the sky was still light and no street lights were lit - for this was the season of the 'White Nights'.

Delegates generally returned to their hotels for meals, but a buffet was always available at the Tauride Palace. Here we enjoyed open-faced caviar or smoked fish sandwiches, small cups of black coffee with sugar and lemon, clear tea in paper thin glasses held in openwork silver holders. Always on the tables were mineral water, fizzy lemonade, light beer and the popular sour milk so many learned to enjoy. In the House of Political Education the highlight of the small cafeteria was a rich borscht served in decorated earthenware bowls.

Special thanks must go to the non-scientific services available at the Tauride Palace - to the women who manned the desks and answered our innumerable questions in a variety of languages and to Intourist who arranged the tours. We were all grateful for the bank where we could change our travellers cheques and for the Post Office. Here we found cards, a philatelic section with many floral stamps as well as special envelopes and stamps to honor the Congress. Most appreciated was the wrapping service of which most delegates made use to send home the two large books of abstracts. Free medical attention was always available but one hopes that not many required the service. 'Accompanying persons' - and this included a few husbands as well as wives and children, spoke warmly of a hospitality room where gifts and maps, tea and advice were always available.

Post Congress tours varied from tourist routine with welcomes from city officials to mountain climbing and the warm hospitality of local botanical institutes. I think everyone came back happy except for one young man who saw Azerbaijan from a hospital bed. One fortunate group spent 3 days in an area not previously open to tourists. Personally, I remember fresh fruit and bowls of hot green tea, so welcome after excursions in the 40-45° weather and the welcoming committee, late at night, whose members presented each of us with a bouquet of flowers (and presumably arranged the vases in each hotel room). The morning we left they came again with armsful of flowers for all. Yet we wondered at the late cancellation of several tours, especially the

one to Yakutsk, and the shortening of another by two days that resulted in an anti-climatic 8 days in Moscow.

Comments of the Congress picked up on the return flight varied. The Canadian group unfortunately got off to a bad start. Our hotel was a disappointment. We arrived too late to register so missed the opening plenary session and the surprise ballet with which it ended, although we were only a few blocks away. Several delegates who expected to give papers the next morning will remember stopping delegates on the street late at night to find an English programme.

As with all conferences, there was much that was good and some things that were not. For a botanical meeting there was perhaps too much emphasis on sight-seeing. In general, opportunity to meet others was limited. Meetings were scattered, there were few events at which most delegates were present, and shuttle buses did tend to limit casual contact to those in the same hotel. For others, the best part of the Congress was the personal contact - the exchange of ideas with people they wanted to see or could not have met in any other way. Some felt that not enough young people doing good work were invited to speak. Another particularly enjoyed the selection of symposia but was several times disappointed when a key speaker did not turn up. But it was a wonderful experience and in general we were very impressed with what we saw of the scientific, the social and the cultural life.

I am sure that all members of the CBA/ABC who were in Russia will join me in saying thank you to our hosts for the years of work that made this Congress possible. In addition to planning for the scientific sessions, the organizing committee had to see that all were housed, fed, transported and entertained - a tremendous undertaking for which they are to be sincerely congratulated.

Mary I. Moore.

CURATOR OF THE VASCULAR PLANT HERBARIUM, UNIVERSITY OF TORONTO

Following the appointment of Professor J.E. Cruise to the Directorship of the Royal Ontario Museum, Dr. John Grear has been appointed to the position of Curator of the Vascular Plant Herbarium of the University of Toronto (TRT).

Dr. Grear is originally from Wrigley, Tennessee. He was an undergraduate at Austin Peay State University, Clarksville, Tennessee, and completed his Master's Degree at Vanderbilt University, Nashville, Tennessee. In 1968, he received his Ph.D. from Columbia University, New York, New York, for his Revision of the American Species of *Eriosema* (Leguminosae-Lotoideae). Prior to his appointment, he was Associate Professor of Botany at the University of Toronto, a position which he will continue to maintain. He is currently completing research on the *Rhynchosia* species of North and South America.

THE NEW GESELLSCHAFT FÜR ÖKOLOGIE

It appears not to be generally known that a new and rather large ecological society has recently been established in Central Europe,

calling itself "Gesellschaft für Ökologie (Society for Ecology). It comprises the German-speaking countries of this region where the science of ecology has not had a tradition of its own nor enjoyed any public esteem comparable to that in the English-speaking countries. As ecology has been considered a part of biology or, to a much lesser degree, of geography, the ecologists of Austria, Germany and Switzerland have been used to be members of societies of biology, botany, zoology, soil science landscape architecture, forestry, etc.

However, the "environmental movement" of the late sixties drove the ecologists both to more public action and closer cooperation. In October 1971, more than 150 ecologists from Austria, the Federal Republic of Germany, and Switzerland assembled at Constance to establish their own society which was not to be a national one, but a gathering place for all ecologists speaking, or familiar with, the German language.

After three consecutive meetings from 1972 to 1974, the new Society is firmly established and has won public recognition. The membership is approaching 600. The present President is Dr. Hermann Remmert, Professor of Zoology at the University of Erlangen. The annual meeting of 1975 was held at Vienna, Austria, from September 22 to 24, and was preceded by a field trip to MAB research sites in Austria (Grossglockner high alpine zone, Lake Atter area) and to the site of the much-disputed barrage of the Danube river in the famous Wachau valley. The field trip started on September 18 at Zell am See, Austria. The main topics of the annual meeting were alpine ecosystems, large river ecosystems, role of water bodies in dry areas of Central Europe.

The new Society has not yet established its own periodical. However, the lectures of the meetings of 1972, 1973 and 1974 have been published as Tagungsberichte (Proceedings), and are still available (c/o Professor Dr. Paul Muller, Geographisches Institut der Universität, D-66 Saarbrücken, Fed. Rep. of Germany).

Dr. Wolfgang Haber.

PUBLICATIONS

Allertonia - a new series for publication of the results of original botanical and horticultural research undertaken by members of the staff of Pacific Tropical Botanical Garden or in collaboration with the Garden's programs. The title commemorates the late Mr. Robert Allerton (1873-1964), a principle patron and founding trustee of the Garden. Allertonia will be inaugurated with the publication of Rare and Endangered Species of Hawaiian Vascular Plants, by F.R. Fosberg and Derral Herbst.

Coupling of Land and Water Systems.

A.D. Hasler (Editor) 1975.

Based on material presented at a symposium convened by Intecol at the International Congress of Limnology in Leningrad. It provides an examination of bioenergetics and nutrient cycling as a framework for understanding land/water

interactions. Contents: Nutrient-Hydrologic Interaction (Eastern United States). Balances in Man-Made Lakes (Bohemia). - Bog Mires and Their Influence on Landscapes. - Effects of Marshes on Water Quality. - Mangrove Forests and Aquatic Productivity. - Food Relations and Behavior of Salmonid Fishes. - Natural and Modified Plant Communities As Related to Runoff and Sediment Yields. - Landscapes of River Basins. - Trophic Conditions of Italian Lakes as a Consequence of Human Pressures. - The Supply of Minerals to Tropical Rivers and Lakes (Uganda). - Ecological Interactions Between Land and the Littoral Zones of Lakes (Masurian Lakeland, Poland). - Silica and Nitrate Depletion as Related to Rate of Eutrophication in Lakes Michigan, Huron, and Superior. Springer-Verlag, New York.

Indian Journal of Ecology.

Vol. 1 (1) July 1974.

The official publication of the Indian Ecological Society which accepts research papers on all aspects of ecology from members. In this issue there are papers on the uptake of pollutants by algae, populations of grain pests, wheat, soybean and fish. Available from: General Secretary, Indian Ecological Society, Punjab Agricultural University, Ludhiana.

Photochemical Air Pollution: Formation, Transport and Effects

When ultraviolet radiation from the sun interacts with chemical substances such as oxides of nitrogen and hydrocarbons, photochemical air pollution can result. The document investigates the causes of photochemical smogs under Canadian conditions including the probability of the occurrence of temperature inversions -- one of the predisposing conditions for smog formation -- and the distribution of solar radiation in Canada.

The effects of the components of photochemical smog (chiefly ozone, oxides of nitrogen and peroxyacetyl nitrate) on materials, such as fabrics and dyes, and on vegetation are covered as well as the biochemical mechanisms of the toxic action and the morphological and functional changes associated with lung injury in animals following exposure, and the phenomenon of acquired tolerance to oxidants is discussed. The final chapter reviews the present state of knowledge concerning the effects of human exposure to ozone and oxides of nitrogen.

In general, the quantitative dose-response relationships and thresholds of effects, where they are known, have been delineated.

A number of specific and more general research needs have been brought to light by this document.

Publication No. NRCC 14096, Available from: Publications, NRCC, Ottawa, Canada K1A 0R6. Price: \$2.50.

Canada/MAB Report 6: Guidelines for the Selection of Biosphere Reserves in Canada

This report, which should be ready for distribution in September 1975, is the result of a workshop organized by CCMAB and ICMAB under the chairmanship of Dr. Gordon Nelson, to prepare a Canadian Response to the MAB Biosphere Reserve Program.

The recommended criteria and guidelines for Canadian Biosphere Reserves approved by CCMAB and ICMAB, are:

Canadian Biosphere Reserves will be areas of land, and coastal or near-shore environments, requiring long-term management and planning for their protection and conservation; will include examples of the Canadian biomes identified by International Union for the Conservation of Nature (IUCN) for North America; and will be integrated with a world-wide network of biosphere reserves linked by international understanding of purposes, standards and exchange of scientific information.

Each Biosphere Reserve will include one or more of the following categories: -
- Representative areas of Canadian biomes. These representative areas may also contain transition zones, unique features, or local places of exceptional scientific interest.
- Nationally important examples of ecosystems in which landscapes are in harmonious balance with long-established patterns of land use.
- Nationally important examples of ecosystems degraded by the activities of man.

Each Biosphere Reserve should be large enough to be an effective conservation management unit; should emphasize opportunities for ecological research, interpretation, management demonstration, and training; must have an adequate and scientifically sound legal basis; and finally, the legal framework for Biosphere Reserves in Canada should be aligned as closely as possible with those governing Biosphere Reserves of other countries.

Obtainable from the Canadian MAB Secretariat, Environment Canada, Ottawa, Ontario K1A 0H3.

Index Herbariorum - a guide to the location and contents of the world's public herbaria. 6th edition by P.K. Holmgren and W. Keuken 1974. Published by Oosthoek, Scheltema and Holkema, Emmalaan 27, Utrecht, Netherlands for the International Bureau of Plant Taxonomy and Nomenclature.

This new edition provides a much needed updating of previous editions and will be a constant reference companion for herbarium botanists and the many other workers who have occasion to utilize the vast store of information contained in the herbaria of the world. The entries relating to Canada are based on the "Review of Canadian Herbaria" which was prepared by a committee of our Systematics and Phytogeography Section chaired by Mr. W.K.W. ("Bill") Baldwin with the active assistance of Mr. W.J. Cody and Mr. P. Landry. Mr. Baldwin, in an analysis and commentary on the entries relating to Canadian Herbaria which will shortly be sent to all members of the Systematics and Phytogeography Section (and which will be available to others on request to the editor of the Bulletin), makes the following observations: there are entries relating to 63 Canadian herbaria which between them house 4,028,000 specimens. These include 2,466,000 specimens of vascular plants, 476,000 of fungi, 193,000 of mosses, 50,000 of lichens, 45,000 of algae and 798,000 specimens which are not designated in the index as to major taxonomic group. 27 of the 63 herbaria are housed in university herbaria

and these contain about half of the 4 million specimens. The oldest Canadian herbarium for which a date of foundation is given is the McGill University Herbarium in Montreal which dates from 1820. However, the herbarium of the Séminaire de Québec may be older for the seminary was founded in 1668. Of the 63 listed herbaria 25 are in Ontario, 11 in Quebec, 12 in the Prairie Provinces, 4 in British Columbia and 11 in the Maritimes and Newfoundland.

Mr. Baldwin's efforts in compiling and keeping up to date the Review of Canadian Herbaria are singled out for particular comment and appreciation in the preface to the Index and our congratulations and appreciations go to "Bill" and his committee.

FORTHCOMING EVENTS

The 3rd International Congress of Plant Pathology will be held in Munchen 16-23 August, 1978. The Congress is being organized by the Deutsche Phytomedizinische Gesellschaft on behalf of and in collaboration with the International Society for Plant Pathology. Further information can be obtained from: Congress Plant Pathology, Biologische Bundesanstalt, Messeweg 11/12, D-3300 Braunschweig, Federal Republic of Germany.

Symposium on the Structure and Function of Biological Membranes, March 14-19th 1976 at Banff, Alberta, sponsored by the Canadian Biochemical Society, the Pan American Association of Biochemical Societies and the University of Alberta. Nine sections are planned for the symposium:-

Overview of membrane structure and dynamics
Lipid dynamics and lipid-protein interactions
The role of lipids in biological membranes
Membrane-associated enzymes
Energy transducing membranes
Membrane transport processes
Cell surface membranes
Membrane-Associated contractile proteins and cytokinesis
Concluding session.

Each section has 3 speakers, distinguished in their particular field.

The registration fee is \$50.00 (\$20.00 for graduate students) and accommodation, including meals, is \$18.00 per day for a shared double room and \$25.00 per day for a single room. The number of single rooms may be limited. Spouses and children can be accommodated with no extra registration fee. The cost of transportation and social events will be additional. Registration of active participants will be limited to 250 and applications will be accepted in the order in which they are received.

Applications to attend the CBS-PAABS Symposium on the Structure and Function of Biological Membranes should be addressed to: Dr. P.G. Barton, Department of Biochemistry, University of Alberta, Edmonton, Alberta, Canada T6G 2H7.

OPPORTUNITIES FOR GRADUATE STUDIES

Dr. I.E.P. Taylor, Botany Department, University of British Columbia, has one opportunity for graduate work in each of the following areas:-

1. Amino acid sequence studies on plant proteins. Possible projects include P-protein components, photosynthetic carboxylases, cellulase and acetylcholinesterase.
2. Germination and early growth of Alnus rubra.

Interested applicants must:-

- (a) have (or obtain) a first class degree in Botany or a field related to the research topic;
and
- (b) have a demonstrated and continuing interest in whole plants;
and
- (c) satisfy the departmental requirements for admission to a higher degree.

Enquiries, including a letter outlining the nature of interest in the selected area, should be addressed to Dr. I.E.P. Taylor, Botany Department, University of British Columbia, Vancouver, B.C. V6T 1W5.

RESEARCH ASSISTANTSHIPS IN POLLEN MORPHOLOGY

Applications are invited from students wishing to pursue post-graduate work, leading to the M.Sc. degree, on pollen morphology and its applications in taxonomy. For further information contact:- Dr. J.K. Morton, Department of Biology, University of Waterloo, Waterloo, Ontario N2L 3G1.

Enquiries about membership of the CBA/ABC should be addressed to the Secretary of the Association:- Miss Carolyn Bird, National Research Council, Atlantic Regional Laboratories, 1411 Oxford Street, Halifax, Nova Scotia B3H 3Z1.

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