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BULLETIN

L'ASSOCIATION BOTANIQUE DU CANADA

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PATRON

HIS EXCELLENCY THE RIGHT HONOURABLE EDWARD SCHREYER, C.C., C.M.M., C.D., GOVERNOR GENERAL OF CANADA

PATRON D'HONNEUR

SON EXCELLENCE LE TRÈS HONORABLE EDWARD SCHREYER, C.C., C.M.M., C.D., GOUVERNEUR GÉNÉRALE DU CANADA

CBA/ABC ANNUAL MEETING 1981, GUELPH

Members should now have received the Registration Forms for the 1981 Annual Meeting in Guelph, June 7-11. Late registration fees apply after April 1, 1981.

If you have not received a Form, contact:- Dr. J. Gerrath, Department of Botany and Genetics, University of Guelph, Guelph, Ont N1G 2W1

CALL FOR "EMERGENCY RESOLUTIONS"

Members are reminded that, in accordance with By-law 76, ""emergency resolutions" may be submitted to the Board of Directors at any time prior to their meeting immediately before the annual meeting. The Board of Directors will then decide whether they conform to the general guidelines for resolutions ....."

Resolutions submitted under By-law 76 must be received by the Secretary 10 days before the annual meeting (NO LATER THAN MAY 29, 1981). "Emergency resolutions" can only be admitted if they deal with an emergency situation, which leaves no time for preparation of a normal resolution.

Send "emergency resolutions" plus all relevant material to the Secretary: Dr. Iain Taylor, Secretary, CBA/ABC, Dept. of Botany, Univ. of British Columbia, Vancouver, B.C. V6T 2B5

XIII INTERNATIONAL BOTANICAL CONGRESS — UPDATE ON TRAVEL ARRANGEMENTS

Trip #2 is going. All applicants for this trip (Depart August 7; one week in New Zealand; proceed to Congress; Return August 29) will receive further details soon. This trip has at least 15 members.

Trip #1 (Depart August 7; all time in Australia; Return August 29) is still open and, with a few more applicants, it will definitely go.

Trip #3 (Depart August 7; one week in the Cook Islands; proceed to Congress; Return August 29) may still go, but subscription is low and this trip will be cancelled on May 15 unless it fills.

ALL OTHER TRIPS ARE CANCELLED due to lack of interest.

Travel and accommodation details, plus as many botanical tips as we can gather, will be circulated to travellers. Meanwhile, GET AN UP-TO-DATE PASSPORT. You will hear from the travel agent about visa requirements before the end of May.

Don't forget the Abstract deadline — May 15, 1981.

Please contact the Secretary if you have any questions, or you wish to join any of the three trips above: Dr. Iain Taylor, Dept. of Botany, Univ. of British Columbia, Vancouver, B.C. V6T 2B1. Phone: (604) 228-2340.

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LIONEL CINQ-MARS AWARD

The following regulations have been adopted for the judging of the Lionel Cinq-Mars Award.

1. The Lionel Cinq-Mars Award shall be given for the best student paper presented at the Annual Meeting of the CBA/ABC.

2. Any *bona fide* student enrolled at any Canadian institution of higher learning is eligible.

3. Guidelines to competitors:-

a) The paper will be presented during the appropriate session as determined by the program committee.

b) Adjudication will be on the basis of *content*, 60% (originality, technical expertise, and associated subject knowledge), and *presentation*, 40% (lucidity and logical flow, value of visual aids if appropriate, audibility and 'presence').

J. B. Phipps
Chairman, Judging Panel
Lionel Cinq-Mars Award

WELL, DID YOU EVER?

Problems of drinking and driving are not new, it seems. The Romans had legislation trying to reduce the number of collisions between drunken charioteers.

From: Gardenland 8(2):25

NEWS FROM THE SECTIONS

Ecology Section

Chairman: Dr. K.I. MacInnes, Site 11, Box 21, Yellowknife, NWT X1A 1H1

General Section

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

Mycology Section

Chairman: Dr. J.A. Traquair, Plant Pathology Section, Agric. Canada Research Station, Lethbridge, Alta T1J 4B1

The time of the Annual CBA/ABC Meeting in Guelph is rapidly approaching, and we hope that mycologists are planning to attend. In addition to the regular contributed paper and poster sessions, the Section is initiating the Luella Weresub Memorial Lecture to honor the support and participation of an internationally respected member who died in Ottawa on October 12, 1979. The Lecture this year will be given by Bryce Kendrick, distinguished "Hypomycetologist" from the University of Waterloo.

Phycology Section

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

The Section is planning a symposium on Nanoplankton at the Annual Meeting in Guelph, to be followed by a contributed paper session. We hope that many of you can attend, and look forward to a lively meeting.

Systematics & Phytogeography Section

Chairman: Dr. G.A. Argus, Museum of Natural Sciences, Botany Division, Ottawa, Ont K1A 0M8

PHYLETIC HEDGE?

Robert F. Thorne, a plant phylogenist and evolutionist, has a very personal and characteristic writing style. Opinions are strongly stated, and are scattered throughout his publications. I found the following quotation very funny, and thought that I would share it:-

> *Incidentally we should bury for ever the metaphor of the phylogenetic tree as highly unrealistic, at least for a complex group like the angiosperms with numerous main trunks and many branches rising through geologic time to the present. The phyletic shrub is a much more accurate metaphor though perhaps a phyletic hedge might be even more appropriate.*
>
> (Thorne 1976, p. 56)

Think the "phyletic hedge" will catch on?

(Thorne, R.F. 1976. A phylogenetic classification of the Angiospermae. Evol.Biol. 9:35-106)

Robin Day
Univ. New Brunswick

2ND MARY E. ELLIOTT MYCOLOGICAL FORAY

The 2nd Mary E. Elliott Mycological Foray was held on October 19, 1980, at the Pinery Provincial Park near Grand Bend, Ontario. The foray was hosted by the Department of Plant Sciences at the University of Western Ontario, London. The assistance of Mrs. Susan Legeza in arranging laboratory facilities is greatly appreciated.

Although the foray was scheduled late in the "mushroom" season, about 50 different fungi from diverse taxonomic groups were observed in the varied sand dune and pine-oak stands in this Lake Huron park. The abundant ascocarps of *Cordyceps ophioglossoides* parasitizing Hart's Truffle (*Elaphomyces* sp.) were noted with interest, as were the Stalked Puffball (*Tulostoma simulans*) found on sand dunes, and the Delicate Mushroom, *Mycena griseoviridis*, with a distinctive cucumber-like odor when fresh.

List of Fungi Noted on the 2nd Mary E. Elliott Foray, Pinery Provincial Park, Ontario

**Agaricus silvaticus* Vitt. ex Fr.
**Amanita citrina* (Schaeff.) S.F. Gray
**A. muscaria* (Fr.) Hooker
Apiosporina morbosa (Schw.) von Arx
Byssocorticium atrovirens (Fr.) Bmd. & Singer
Candelabrum spinulosum van Beverwijk
**Cantharellula umbonata* (Gmelin ex Fr.) Singer
**Clavaria pistillaris* (L.) Fr.
**Clitocybe adirondackensis* Pk.
**Collybia butyraceae* Fr.
C. dryophila (Bull. ex Fr.) Kummer
**Cordyceps ophioglossoides* (Ehr.) Link
Coriolus versicolor (L. ex Fr.) Quél.
Cortinarius spp.
**Crepidotus fulvotomentosus* Pk
**Cystoderma granulosum* (Morg.) Smith
Dacrymyces palmatus (Schw.) Bres.
Daldinia repandum (Bolt. ex Fr.) Ces. & de Not
**Dentinum repandum* (L. ex. Fr.) S.F. Gray
**Entoloma lividum* Fr.
**Elaphomyces* spp.
**Fomes everhartii* (Ell. & Gall.) von Schrenk & Spaulding
**Hygrophorus conicus* (Fr.) Fr.
**H. eburneus* (Fr.) Fr.
**H. russula* (Fr.) Quél.
**H. sordidus* Pk.
Hypomyces lactifluorum (Schw.) Tul.
**Laccaria laccata* (Fr.) Berk. & Br.
**Lactarius chrysorheus* Fr.
**Leotia lubrica* (Scop.) Pers.
**Lepiota procera* (Fr.) Kummer
**Lepista irina* (Fr.) Bigelow
**L. nuda* (Fr.) Cooke
Lycogola epidendrum (L.) Fr.
**Lycoperdon perlatum* Pers.
Marasmius spp.
**Mycena alcalina* (Fr.) Quél.
**M. griseoviridis* Smith
**M. haematopus* (Fr.) Quél.
**M. pura* (Fr.) Quél.
Omphalina spp.
Pholiota squarrosa (Fr.) Kummer
Psathyrella hydrophila (Fr.) A.H. Smith
**Polyphorus brumalis* Pers. ex Fr.
**Russula emetica* (Schaeff. ex Fr.) Pers. ex S.F. Gray
Spirosphaera minuta Hennebert
Strobilomyces floccopus (Vahl. ex Fr.) Karst.
**Stereum ostrea* (Blume & Nees ex Fr.) Fr.
**Suillus americanus* (Pk.) Snell
Tricholoma spp.
**Tricholoma flavovirens* (Fr.) Lund
**Tulostoma simulans* Lloyd

---

* species deposited in the Mycological Herbarium (ALTA) at the University of Alberta in Edmonton, Alberta.

STATUS REPORTS ON ENDANGERED, THREATENED, AND RARE CANADIAN PLANTS

At the April 1980 meeting of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), a status report on *Pedicularis furbishiae* S. Wats., written by G. Stirrett, Grand Falls, N.B., was considered and the species was placed in the endangered category in Canada. This action had a rapid positive response from the government of New Brunswick, who, in October 1980, placed it under its Endangered Species Act. This result of a COSEWIC initiative is very gratifying, and underscores the usefulness of preparing status reports on endangered or threatened species.

In response to our request for persons to write COSEWIC status reports (CBA/ABC *Bulletin* 12(4), October 1980) the World Wildlife Fund is now funding the preparation of full length reports on:- *Limnanthes macounii* Trelease (report being prepared by A. & O. Ceska, Univ. of Victoria), and on *Phegopteris (Dryopteris) hexagonoptera* (Michx.) Fée (report being prepared by G. Vincent, Univ. de Montréal, under the direction of A. Bouchard). Short reports are being written for 23 taxa that are endemic, or of limited distribution, in British Columbia and the Yukon (reports being written by G. Douglas, Victoria), and documented maps of rare New Brunswick plants are being prepared (by H. Hinds, Univ. of New Brunswick).

In addition, status reports are being funded by other sources for: *Abronia umbellata* var. *acutalata* (Standley) Tillett, *Carex arenicola* ssp. *pansa* (Bailey) Koyama and Calder, and *Ophioglossum vulgatum* L. (reports being prepared by M. Blouw, Univ. of British Columbia, under the direction of R. Taylor), and for *Salix planifolia* ssp. *tyrrellii* (Raup) Argus and *Armeria maritima* ssp. *interior* (Raup) Porsild (reports being prepared by G. Argus, National Herbarium).

Status reports have been written for *Cypripedium candidum* Muhl., *Isotria medeoloides* (Pursh) Raf., and *Buchnera americana* L. by the Ontario Ministry of Natural Resources, but these reports have not yet been released pending "internal review"

Status reports and subsequent COSEWIC declaration of endangered or threatened status can be an important stimulus to the protection of species and their critical habitats. The cooperation of all botanists and conservationists is needed in this effort. Limited funds are available through COSEWIC and interested persons are urged to contact the author (at the National Herbarium, National Museum of Natural Sciences, Ottawa, Ont K1A 0M8) for information on the program, including guidelines for the preparation of status reports and a preliminary list of candidate species.

G. W. Argus
Chairman, Plants Subcommittee
COSEWIC

HERBARIUM PRACTICE AND ETHICS

The Herbarium Curators' and Associates Meeting held in Vancouver last July requested that permission be obtained to publish the following report in the CBA/ABC Bulletin. It is hoped that all members of the CBA/ABC who have dealings with herbaria will follow the guidelines for desirable practices.

Report of the Committee for Recommendations in Desirable Procedures in Herbarium Practice and Ethics

The first committee report on desirable procedures in herbarium practice and ethics under the auspices of the American Society of Plant Taxonomists was published previously in [Brittonia 10:93-95, 1955]. The report, prepared by C.E. Kobuski, C.V. Morton, M. Ownbey and R.M. Tryon, was well received and proved to be useful to curators and herbarium users alike. Because the number of practicing taxonomists has increased dramatically since the original report and because the publication is no longer generally available, a new committee was appointed to prepare a second report. This report follows the basic outline of the first and is concerned primarily with the updating of several sections, although some additional recommendations are made.

The primary role of an herbarium is to provide documentation and data for systematic research in the broad sense. These collections are the wards of Botany, and curators[1] have obligations to make them available to serious students. Access to the collections and data normally is furnished by curators in several different ways: by lending material to qualified scientists; by maintaining an exchange program; by supplying facilities for visitors; and by replying to reasonable requests for information concerning specimens. At the same time, curators are obliged to preserve the specimens in their trust for future use and should refuse the use of material whenever its safety is in question.

I. LOANS

All correspondence concerning loans should be addressed to the Director or Curator of the Museum or Herbarium, except by special arrangement. Ordinarily, a loan is made between two institutions, not between an institution and an individual, and arrangements should be made through proper channels to insure adequate maintenance of records.

a. Requesting a loan

Loans normally should be requested by the curator of the borrowing institution since loan records of the requesting and lending institutions are of equal importance. A loan should be requested for serious systematic research by a competent investigator, not for the routine identification of specimens. It should be requested only after preliminary studies have been made.

Requests should be as clear as possible and should include the following elements: a brief statement of the proposed research; the name of the family (families), genus (genera), and species desired; synonyms (especially generic) under which the material might be filed; and the geographic area to be included. If nomenclatural types are requested, the borrower should send the necessary bibliographic and collection data to facilitate locating them. Requests for material in a particular condition should be made with restraint: it is easy to select specimens of oaks with acorns, but difficult to select fern specimens with mature spores. It also should be recognized that it is difficult to comply with requests for "accurately identified material".

b. Sending the loan

All materials requested should be sent. As a matter of practice, however, the borrower should realize that it is an increasingly common practice for large herbaria to retain one or two sheets of each species for reference purposes. Every sheet (or package, in the case of cryptogams) should bear an herbarium emblem or other identifying label; needed repairs should be made before the loan is shipped; and the material should be carefully packed and addressed. A letter or loan form to the borrower, sent under separate cover, should state the number of boxes in the shipment, the number of sheets or specimens in the loan, and the length of time for which the loan is made. Loans within the United States are usually sent by library rate ....; if requested, the borrower should be prepared to pay the shipping charges in both directions.

c. Receiving the loan

The material should be fumigated as soon as it is received. It should be examined for damage in transit in order to establish that noted damage did not occur while the material was in the borrower's hands. Needed repairs should be made immediately. The number of the sheets or packets should be verified, and receipt of the loan should be promptly acknowledged.

d. Studying and annotating material

Specimens on loan from another institution are a special charge. They should be stored under dust-proof and insect-proof conditions and handled carefully to avoid breakage. Accidental breakage should be repaired immediately. Portions, especially of types, should not be detached without permission; dissections should be carefully made and placed in packets on the sheets. Types should be identified promptly, labeled as such, and given special care.

All sheets should be annotated by printed or typed labels or in a neat and legible script in permanent black ink, not ball point; annotation labels should be used. The original label should never be modified; the annotation should be placed as close to the original label as possible without obscuring it, the herbarium emblem, or the specimen. A sign of affirmation should be placed as close as possible to the name affirmed (there may be other names on the sheet, or others may be added later); it is as important to affirm a previous identification as to provide a new one. The date of the annotation should be recorded with the initials and surname of the annotator. Initials alone should never be used. If possible, inadequate labels should be amplified, mixed labels identified, and attention called to duplicate sheets and to specimens that are essentially worthless.

[1]Curator is used as a general term to designate that person responsible for a collection regardless of the actual title that he may carry.

As in all fields of endeavor, new techniques that hold promise of improved results constantly are being developed. These techniques in systematics often partially degrade specimens, and special care must be taken to keep this degradation minimal. Anatomical, chemical, and pollen studies are examples. In all cases requiring removal of material from the specimens, prior permission of the curator must be obtained, and any special institutional regulations must be observed. When routine examination requires removal of sepcimens, as in making microscopic preparations of cryptogams, the user must exercise responsibility and judgement as to whether there is sufficient quantity to justify his partial destruction of it, and curators should, whenever possible, have available prepared slides of such material. Additionally, other kinds of data extraction, particularly in computorized form, although they do not degrade specimens, fall in the same general category of special techniques. Specimens employed in any of these studies should be annotated as such, and, if special preparations are made from the specimens, a portion of those preparations must be returned to the institution supplying the material. In the event that the product of the special preparation is in photographic form, a print should be returned.

e. Returning the loan

The number and ownership of sheets should be confirmed by the borrower. The loan should be carefully packed; damage in transit has often been due to careless packing by the borrower. The borrower should pay shipping costs on the return, except for unsolicited loans. A letter or loan form should precede the return of specimens. The loan should be returned as soon as possible or at the expiration of the stated period. Time extension for a loan may be requested and granted at the discretion of the curator of the lending institution. Loans should not be removed from the institution to which they are consigned. Partial loan returns are discouraged by some institutions and should not be made without prior agreement. If it is necessary to transfer a loan from one institution to another, prior permission must be obtained from the lending institution. Once the transfer has been effected, responsibility shifts to the new borrowing institution.

f. Receiving the returned loan

Receipt of the returned loan should be acknowledged promptly and should include confirmation of the number of sheets or packets and of their condition. Specimens should be fumigated before being replaced in the herbarium.

g. Publication

Loans should be acknowledged in published papers, and reprints, if available, should be sent to the institution that lent specimens for the study.

II. EXCHANGES

One of the time-tested methods for distributing scientific materials is through an exchange program. Generally, exchange is on an inter-institutional basis, although exchanges with individuals sometimes are arranged. It is important to maintain meticulous records, and general agreements between institutions should be made prior to the initiation of an exchange. We recommend that exchanges be made on a specimen-for-specimen basis to avoid misunderstandings and that the specimens be fertile, reasonably well prepared, and with adequate label data. It may be worthwhile to mention that as a practical matter, large and small institutions have developed quite different attitudes toward the credit/debit balance of exchanges: small institutions generally strive to keep individual accounts in reasonable balance, thereby assuring a steady growth factor based on the level of their own energy in generating exchange materials; larger institutions are much less sensitive about the individual credit/debit balance and are generally willing to wait until material that fits into their areas of interest becomes available. Curators should be aware of these two different philosophies and should attempt to respond to them.

The so-called exchange for identification is in reality a gift in exchange for identification. An agreement should be reached with the specialist before specimens are sent. It is customary for the specialist's institution, or the independent specialist, to retain a complete or nearly complete set of the material. However, if all material of a collection is sent, moderation should be used in extracting a set to be retained. The name of the identifier should be placed on all labels of the original and duplicate sets. Any duplicates not actually seen by the identifier may be noted as such to avoid confusion in mixed collections.

III. VISITORS

Visitors, both professional and student, have never been more welcome than at the present time, and this attitude should be fostered. Notification should be given of one's intention to visit an institution for any period. The visitor should acquaint himself with the regulations and customs of the institution and its normal working hours and should be prepared to comply with them. It is helpful to visitors if the curator can furnish a brief written account of the regulations governing the use of collections. Access to the collection permits the immediate examination and annotation of specimens or the opportunity of selecting one's own loan. The latter is especially important, since it insures that all needed specimens will be included in the loan. If a visitor anticipates selecting a loan he should make appropriate arrangements with the curator on his arrival. Visitors intending to bring material with them for comparative purposes should allow adequate time so that the specimens may be fumigated before taking them into the herbarium. In using the collections, special attention should be given to replacing specimens in their proper places in folders and to maintaining existing arrangements of folders. Comments in part I-*d* concerned with the study and annotation of materials are equally applicable to visitors to an herbarium. Visitors should not expect curators to stay after hours or come in at special times for their convenience.

IV. REQUESTS FOR INFORMATION

Requests for information concerning specimens should be made with regard to the work that will be required in complying. Requests should ordinarily not be made for distribution records, copies of labels, and so forth because of the danger of introducing errors into the scientific

literature based on data from poorly identified specimens. If such requests are unavoidable, the number of specimens to be examined and the information requested should be kept to a minimum.

Lorin I. Nevling, Jr.

(Reprinted with permission from: Brittonia 25:307-310, 1973)

WILD BREADSTUFFS

It had been intended that the Symposium papers from the 1979 Ottawa Meeting should be published as a Supplement to the CBA/ABC *Bulletin*. As noted in the last issue, this is no longer the intention. The original plan had been to publish the following note following Dr. Walter Lewis' paper. We have decided to publish the note here because of its relevance to the current interest in using wild foods.

Breadstuff from Wild-growing Plants.

The list of wild breadstuffs in north-eastern North America approaches one hundred. It represents many genera and families, and includes the use of various plant parts. Our purpose was to select a few obvious plants from the Ottawa Valley region and examine their usefulness from a modern perspective: their availability, ease of home processing, and general acceptability. We investigated the lichens (*Pamelia* and *Cladonia*), rootstocks of the monocotyledon Cat-tail (*Typha*), seeds of two herbaceous dicotyledons, Lamb's Quarters and Pigweed (*Chenopodium* and *Amaranthus*), and acorns of the arborescent Oak (*Quercus*). We have, in a previous paper Gaertner, 1970), concluded that the inner bark of Balsam Fir (*Abies balsamea* (L.) Mill.) is the best suited product from our conifers for breadmaking.

Because none of our foodstuffs possesses the gluten essential to make leavened bread, and because we found that most of the breadstuff is too distinct in flavour, we have used our material to extend rather than to replace flour. Two parts of all-purpose flour to one part of substitute were used in all instances. A kitchen blender was used in the actual flour-making.

Lichens are a very heterogenous group. They contain a whole spectrum of carbohydrates and acids, particularly usnic acid and its relatives. Most are non-poisonous, and the disastrous effect of the acid can be offset by boiling in water with baking soda previous to use. We air-dried the boiled plants and pulverized them. The bread was nearly black in colour and very moist. Although distinct in flavour, it could be consumed without difficulty. Availability of lichens as a food source might be deceptive, because this perennial plant usually has a relatively slow growth rate.

To collect rootstocks of Cat-tails in their wet habitat sometimes challenges ingenuity. Flour is obtained by maceration, flotation, and sedimentation. The very fibrous nature of the rootstock presents a problem. Repeated washings produces a mucilaginous liquid that forms a good base for a fruit soup (3 cups of mucilaginous liquid, 1½ cups fresh or frozen raspberries, 1½ cups sugar, 1½ tsp. lemon juice, 1 cup water. Liquify raspberries with some of the liquid, add remainder of ingredients, boil for 10 minutes, cool and serve - preferably with a scoop of lime sherbert). Typha flour is probably least distinct in taste from that of wheat flour.

Seeds from Lamb's Quarters and Pigweed are easily obtained in large quantities. They are easily ground into flour distinguished by the black fragments of the seed coat. Its taste was fittingly described as "mousey" by Fernald *et al* (1958), but it is quite acceptable. Perhaps a better way to utilize these seeds would be to boil them and serve as gruel.

When the more common Red Oak (*Quercus rubra*) is used for breadstuff, tannins must be leached from the acorns by repeated boiling and soaking in several waters. The acorns are then dried and ground into flour. The chief difficulty encountered is the popularity of this fruit with worms and squirrels - by the time the acorns should mature, they have usually disappeared from the tree.

References

Fernald, M.L. and A.C. Kinsey. 1958. Edible Wild Plants of Eastern North America. Revised by R.C. Collins. Harper and Bros. New York.

Gaertner, E.E. 1970. Breadstuffs from Fir (*Abies balsamea* (L.) Mill.). Economic Botany 23:69-72.

Erika E. Gaertner
617 Berwick Avenue
Mount Royal, P.Q.

THE CANADIAN COMMITTEE OF SCIENTISTS & SCHOLARS

The Editor has received the following letter, it is printed for your information.

"As you may already know the Canadian Committee of Scientists and Scholars, whose members' names are listed on the enclosed sheet, has undertaken to provide leadership to Canadians in speaking out in defence of scientists, scholars and others, who are victims of persecution because they have stood up for freedom of thought.

"This Committee is now engaged in a determined campaign on behalf of the mathematician Jose Luis Massera (Uruguay), the physicist Yuri Orlov (U.S.S.R.) and the computer scientist Anatoly Shcharansky (U.S.S.R.), whose cases are described in the enclosed reprint. We should be pleased to hear from you cases of workers in your discipline on whose behalf we should be considering action.

"We realize that we can correspond when necessary directly with you about such cases. But it would facilitate our work and make less demands on your time if you could name some particular member of your society who would take a special interest in our work and with whom we could keep in constant contact."

Eric Fawcett (physicist)
Chairman, Canadian Committee
of Scientists and Scholars

If any member is interested in learning more about this Committee, would they please contact Dr. Fawcett directly: Dr. E. Fawcett, The Canadian Committee of Scientists and Scholars, 39 Elm Ridge Drive, Toronto, Ont M6B 1A2

NEWFOUNDLAND SPRAY PROGRAM APPROVED

Premier Brian Peckford of Newfoundland says that he has no choice but to accept the use of a chemical spray to combat spruce budworm, although he personally does not favor it.

The Newfoundland Government announced on Monday, February 17, 1981, that they will undertake a forest spray program this year using the chemical insecticide Matacil. This year's spray program will cover one million acres and cost an estimated $45 million. It is expected to begin in mid or late June, depending on the weather. The biological insecticide *Bacillus thuringiensis* will be used in one-mile buffer zones around communities and watersheds. Previous spray programs used a two-mile buffer zone.

The decisions to spray and the reduction in the buffer zone were made on recommendations submitted to the government by the Royal Commission on Forest Protection and Management. The Royal Commission found that the forest industry provides direct and indirect employment for about 18,000 people, and a livelihood for more than 50,000. In the light of the evidence, the commission said, "it is clear that the only remedial action which can be taken for immediate control of the pest and for forest survival lies in the use of aerial chemical spraying." Other intensive forest management techniques are essential, but are long-term. "Both paper companies may have to curtail or close their operations in about a decade unless action is taken to protect the wood supply. Faced with this possibility, the commission concludes that aerial spraying is both necessary and urgent."

The commission also noted that a committee of the Newfoundland Medical Association had twice reported that the association was not opposed to a chemical spray program.

Opponents of the program claim that Matacil, in particular, poses a threat to human health, despite a lack of scientific evidence to support them.

Nova Scotia authorities have decided against a chemical spray program, but officials in New Brunswick have been using it to battle the budworm for over 25 years. The Newfoundland government suspended the Matacil spray program in 1979 in favor of an experimental project treating selected areas with *Bacillus thuringiensis*. However, there was no significant reduction in the budworm situation.

Extracted from:
The Evening Telegram, St. John's
Tuesday, February 17, 1981
Submitted by: Bruce A. Roberts

3RD MARY E. ELLIOTT MYCOLOGICAL FORAY

The 3rd Mary E. Elliott Mycological Foray will be held in Quebec on August 14-15, 1981, preceding the 5th North American Conference on Mycorrhizae. The Foray is being organized by Scott Redhead, Biosystematics Research Institute, Ottawa, and Shannon Berch, Laval University, Quebec City.

FORTHCOMING MEETINGS

American Society of Pharmacognosy and Society for Economic Botany will hold a Joint Meeting at the Massachusetts College of Pharmacy, Boston, Mass., July 12-17, 1981. A Symposium entitled 'Plants and Their Products in the Service of Man' has been arranged to provide an overview of some useful medicinal and economic products that can be obtained from plants. Plenary lectures include:- 'Herbaria as Resource Centers'; Plants as Renewable Resources'; 'New Techniques in the Separation and Identification of Natural Products'; and 'New Areas for Plant Product Research'.

For information concerning the scientific program contact:- Dr. Geoffrey A. Cordell, College of Pharmacy, Univ. of Illinois, P.O. Box 6998, Chicago, IL 60680.

For information on the local arrangements contact:- Dr. Robert F. Raffauf, College of Pharmacy, Northeastern Univ., Boston, MA 02115

Members interested in this meeting may be advised to double-check the dates. The Editor received two sets of information. One that the meeting was July 12-17, and the other that it was July 17-21!

5th North American Conference of Mycorrhizae will be held in Quebec, August 16-21, 1981. The keynote speakers include:- O.K. Miller; S. Scannerini & P. Bonfante-Fasolo; D.S. Hayman; C.P.P. Reid & R.C. France; T. St. John & D.C. Coleman; D.J. Read; and, J. Menge. The organizers expect some 300 participants from 35 countries, and have already received more than 225 proposals for oral and poster presentations.

Abstracts must be presented before May, 1981. For more information contact:- J. André Fortin, Faculté de foresterie et de géodésie, Cité Universitaire, Université Laval, Québec, PQ G1K 7P4

FORTHCOMING EXHIBITIONS

Cloud Flowers: Rhododendrons East and West, an exhibition of 47 original watercolors of rhododendron species that can be grown in Canada, will open at the Fine Arts Gallery of the University of British Columbia, on Tuesday, May 5, 1981. The exhibition was sponsored by The Botanical Garden of the University of British Columbia and developed by the Art Committee of the Friends of the Garden. Ten Canadian artists were invited to choose their own specimens from the genus, and the resulting paintings show great diversity of color and form.

The exhibition will be on show at the UBC Fine Arts Gallery until August 1981, and will then tour the country. The exhibition tour schedule is as follows:- October-November 1981, Penticton Art Gallery, Penticton, BC; February-March 1982, Brandon Allied Arts Council, Brandon; April-May 1982, London Regional Art Gallery, London; June-July 1982, Laurentian University Museum and Arts Centre, Sudbury; August-September 1982, Hunt Institute for Botanical Documentation, Pittsburgh, PA; October-November 1982, Confederation Centre Art Gallery and Museum, Charlottetown; December 1982-January 1983, Norman Mackenzie Art Gallery, Regina; February-March 1983, Provincial Museum of Alberta, Edmonton; April-May 1983, Royal Ontario Museum, Toronto; June-July 1983, Kamloops Public Art Gallery, Kamloops, BC.

BOTANY 80 T-SHIRTS

The T-shirts specially designed for BOTANY 80 are still available, but not for long! The shirts are chlorophyll green with white piping around the neck and armbands, and there is a white modified flower design on the front. They are available in the following sizes: children's small and medium; and adults small, medium, large and extra-large. The price is $5.00 for children (3 for $12.50) and $6.00 for adults (3 for $15.00), postpaid. They wear well and make excellent presents. The shirts can now be seen in several countries other than Canada — don't be left out!

Send a cheque (payable to BOTANY 80) or money order (Canadian funds) to: BOTANY 80, Dept. of Botany, University of British Columbia, Vancouver, B.C. V6T 2B1

RECENT PUBLICATIONS RECEIVED FOR REVIEW

History of the Maritime Closed-Cone Pines, Alta and Baja California by Daniel I. Axelrod. 1980. Univ. of California Publications in Geological Sciences, Volume 120. University of California Press, Berkeley. $7.00 (U.S.)

Plants of Quetico and the Ontario Shield by Shan Walshe. 1980. University of Toronto Press, Toronto. $25.00 (cloth); $7.95 (paper).

If anyone is interested in reviewing the book by Daniel Axelrod, would they please contact the Editor.

BOOK REVIEW

Taxonomy of *Lygodesmia* (Asteraceae), by A. Spencer Tomb. 1980. Systematic Botany Monographs, Volume I. American Society of Plant Taxonomists. 51 pp.

This, the first in Systematic Botany's new Monographic Series, is a classical, rather short (51 pages) monograph of a small genus (8 species) of temperate North American plants. Nonetheless, it is a concise work that deserves a place in the libraries of vascular plant taxonomists, especially students of the Asteraceae. It will probably have more appeal to American taxonomists than to those of us in Canada since only one species, *Lygodesmia juncea*, crosses our border. The paper includes much information on cytology and palynology, with illustrations of karyotypes, idiograms, and scanning electron micrographs of pollen, fruits and pappus structures. There are good drawings of plants and achenes of each species as well as distribution maps of each. I found the simple indented key quite usable, and the comparative lists of features of closely allied species especially helpful.

I was bothered by one of the maps, although we in Canada may be overly sensitive. The map showing the distribution of *Lygodesmia juncea* shows state boundaries but, once the Canadian border is reached, no provincial boundaries are indicated. However, on another map of the distribution of *L. texana*, the Mexican states are indicated. There is also a problem of inconsistent units of distance at least once, where miles are given but kilometers used a few lines down. Thirdly, at least four references cited in the text (Dille, 1976; Engel, 1969; Powell & Sikes, 1970; and Olsen, 1973) are not included in the "Literature Cited".

My criticisms are minor ones. Overall, I find the monograph to be a very well done work.

Gerald B. Straley
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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.

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