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The Canadian Botanical Association Bulletin

Bulletin de l'Association botanique du Canada

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President's Message

In this issue, I would like to discuss three topics that have caught my attention in the past couple of months :

1) The Canadian Federation of Biological Sciences (CFBS) have contacted us;
2) where are our students? and
3) «the winners are …?».

I believe that these should be brought to the attention of all the members.

First, in October, I received a phone call from the CFBS head office inviting us to rejoin them. Who would have thought that after all of the adventures we have had previously with this federation! If you remember, we withdrew from the CFBS a few years ago. The new argument is that the federation is trying to be more representative of all its members and wish to lobby Ottawa on the main issues raised by each member's association. The memberships formula is different and it is a three years contract. The Canadian Society of Zoology is rejoining the CFBS this year and a few more are ready to do it too. Therefore, I would greatly appreciate comments from the members.

The second issue that I would like to discuss is the number of students in the association. We have mentioned several times some concern about the lower number of students currently involved. This might be due to a drop in the number of students in botany in our universities, but it also could mean that they need some encouragement to join the association. The students are the future professors and professionals in our field and in our association. I would like to encourage supervisors to sponsor one student to become a member of the association. To the students, it would be greatly appreciated if you could send us suggestions on issues that you would like the association to discuss.

Finally, my last point is a call for candidates for the Georges Lawson medal and the Mary E. Elliot award. To be successful, your help is needed. The Georges Lawson medal is given each year to a botanist who significantly contributes to botany in Canada, either in terms of life-long accomplishment or for a major contribution to the field. The Mary E. Elliot award is presented to a particularly

(continued on next page)

Canadian Botanical Association (CBA)

The Canadian Botanical Association is honored to have a patron such as Her Excellency the Right Honourable Adrienne Clarkson, C.C., C.M.M., C.D., Governor General of Canada.

Bulletin

The CBA Bulletin is issued quarterly (February, May, August, November) and sent to all CBA members. Comments or suggestions about the Bulletin should be directed to the Editor at the address below.

Information for submitting texts

Texts and illustrations for the Bulletin should preferably be sent to the Editor via internet as attached files, nevertheless any medium is acceptable. Any format for texts or illustrations are welcome. Please make sure that scanned illustrations are done with a very good resolution. If you have any question about text submission please contact the Editor.

Association botanique du Canada (ABC)

L'Association botanique du Canada jouit du bienveillant patronage de sa présidente d'honneur, Son excellence la très honorable Adrienne Clarkson, C.C., C.M.M., C.D., Gouverneure générale du Canada.

Bulletin

Le Bulletin de l'ABC paraît quatre fois par année, en février, mai, août et novembre. Il est envoyé à tous les membres de l'ABC. Tout commentaire concernant le bulletin est apprécié par le rédacteur.

Directives aux contributeurs

Les textes et les images sont de préférence envoyés sous forme électronique comme fichiers attachés, néanmoins, tous les supports de même que tous les formats imaginables sont acceptables. Les fichiers graphiques doivent être de très bonne définition. N'hésitez pas à contacter le rédacteur pour toute information.

active member of the association who contributed to the development and the profile of the CBN. For further information concerning these awards or for other comments, please contact me at vasseurl@umoncton.ca. The deadline to submits a nomination is February 1st, 2003.

Liette Vasseur
President, CBA

Message de la présidente

Dans ce numéro, j'aimerais discuter de trois points qui ont retenu mon attention dans les derniers mois :

1) la Fédération canadienne des sciences biologiques revient à la charge;
2) où sont les étudiantes et les étudiants? et
3) les gagnantes et gagnants sont …?

Voilà trois sujets de discussion sur lesquels nos membres devraient se prononcer.

Le premier point découle d'un coup de téléphone de la Fédération. Qui aurait pu penser qu'après toutes nos aventures avec cette fédération nous serions invités à la joindre de nouveau! Et oui, quelle ne fut pas ma surprise. Certains se souviendront que nous nous sommes retirés de la fédération il y a quelques années. L'argument est maintenant que la Fédération veut améliorer sa représentation des sciences biologiques et renforcer son lobby à Ottawa selon des lignes directrices proposées par ses membres. La formule d'adhésion a un peu changé et on parle maintenant d'un contrat de trois ans pour les associations membres. Point intéressant, la Société canadienne de zoologie a joint de nouveau la fédération, et d'autres s'apprêteraient à faire la même chose. Donc, ma question à tous nos membres est : qu'en pensez-vous?

Le deuxième point que j'aimerais aborder est celui de nos membres étudiants. Bien des fois, au cours des dernières années, nous avons soulevé des inquiétudes quant à la diminution de nos membres étudiants. D'un côté il s'agit peut-être d'une baisse d'étudiantes et d'étudiants en botanique au Canada, mais il semble qu'il faut aussi les encourager à devenir membre. Les étudiantes et étudiants représentent la relève de demain au niveau professionnel dans nos universités, nos institutions et dans l'association. J'aimerais lancer un défi aux membres réguliers : payez l'adhésion à l'ABC d'une étudiante ou d'un étudiant de nos universités et donnez-lui la motivation nécessaire à participer aux activités de l'association. Aux étudiantes et étudiants membres, j'aimerais savoir quels sont les enjeux dont l'association pourrait discuter dans le Bulletin afin de vous aider dans votre démarche vers une carrière en botanique.

(Suite page 11)

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Next issue / Prochain numéro

Texts for the next issue, 36(1), must be received before January 22, 2003.
La date de tombée des textes du prochain numéro, le n° 36(1), est le 22 janvier 2003.

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Dexter Reid Sampson (1931- 2002)

A Tribute

Dr. Dexter Reid Sampson was an Honorary Research Associate in the Crops Section, Agriculture and Agri-Food Canada , Eastern Cereal and Oilseed Research Centre (ECORC). A native of New Glasgow, NS, he died in Ottawa on Feb. 20, 2002 at 71 years as the result of an accidental fall.

After degrees at Acadia and Harvard, Dexter devoted his scientific career to plant breeding, initially in horticulture and post-1966 in cereals, at Agriculture and Agri-Food Canada on the Central Experimental Farm in Ottawa. He excelled in plant biology, genetics, practical plant breeding and scientific journalism. Dexter made a major scientific contribution to barley by co-authoring the first paper on 'haploid' plants. The haploid technique became an important short-cut in barley breeding and is now used routinely. The technology was used to produce the first Canadian doubled haploid barley variety, 'Mingo'. Early in his career, Dexter worked on species relationships of oats and oat genetics. He also made contributions to the genetics of male sterility and self incompatibility mechanisms in the mustard family, including radish, cabbage, broccoli, cauliflower and rapeseed. The information and breeding stocks he generated were used by researchers in all these crops, for example, in providing a background in the breeding of hybrid canola, which has become a major Canadian crop.

By 1974 he had turned his attention to wheat. In becoming the Central Experimental Farm winter wheat breeder he produced the feed variety, 'Valour' (registered in 1981) and the pastry winter wheats, 'Gordon' (1980) and 'Harmil' (1990). However, his most noteworthy accomplishment was the subsequent initiation of the CEF breeding program for *Fusarium* tolerant or resistant winter wheats. He identified a resistant Brazilian variety, 'Frontana', made crosses, and began the selections to find a *Fusarium* resistant wheat adapted to the Canadian climate. After his retirement in 1991, his initial selection work continued as parents in new crosses by Radhey Pandeya of ECORC. A unique *Fusarium*-resistant wheat now shows promise from these hybrids and may prove to be a major achievement for the industry.

As an Honorary Research Associate, Dexter continued his scientific career with courage and persistence. He addressed the potential for domestication of Einkorn, a primitive wheat species, for people who have allergies to regular domestic bread or pastry wheats. Working with industry, he realized significant progress.

On a personal level Dexter Sampson was skilled in genealogy, sculpturing, spelunking, but most importantly in human relations and with a genuine humour. He was truly a Renaissance Man and will be missed as a colleague and friend

Donald Léger
National Program on Environmental Health - Biodiversity, ECORC, Agriculture and Agri-Food Canada, Central Experimental Farm, Ottawa

Editor's Note
This text was published in the Bulletin of the Genetics Society of Canada, vol. 33 (4), 2002. Dexter Sampson was a founding member of the Genetics Society of Canada and served as a member of the Editorial Board of the former Canadian Journal of Genetics and Cytology (now Genome) for a number of years.

In the next issue of the CBA Bulletin, 36(1), will be published a list of the publications of Dexter Reid Sampson.

Un hommage

Le Docteur Dexter Reid Sampson était un attaché de recherche honoraire au centre de recherche d'Agriculture et agroalimentaire Canada à la Section des cultures du Centre de recherches de l' Est sur les céréales et oléagineux (CRECO). Dexter, qui est né à New Glasgow (Nouvelle-Écosse), est décédé à Ottawa le 20 février 2002 à l'âge de 71 ans à la suite d'une mauvaise chute.

Diplomé des universités Acadia et Harvard, Dexter a consacré sa carrière scientifique à l'amélioration des plantes, d'abord à celle des plantes horticoles et après 1966 à celle des céréales, sur la Ferme expérimentale centrale (FEC). Il excellait dans les domaines suivants : biologie végétale, génétique, amélioration pratique des plantes et journalisme scientifique. Dexter a beaucoup contribué à la culture de l'orge grâce à la rédaction, avec un autre auteur, du premier ouvrage scientifique sur les plantes « haploïdes ». La technique d'haploïdie est devenue un raccourci important dans l'amélioration de l'orge et est maintenant utilisée couramment. Cette technologie a servi à produire la première variété canadienne d'orge dihaploïde nommée 'Mingo'. Au début de sa carrière, Dexter a travaillé sur les relations entre les

Poorly Known Economic Plants of Canada - 35. Arrow-leaved balsamroot *Balsamorhiza sagittata* (Pursh.) Nutt.

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Indigenous Peoples throughout western North America have used arrow-leaved balsamroot as food and medicine. It is ranked among the most versatile of wild food plants used by the peoples of the southern interior of British Columbia. Today, there is growing interest in its medicinal and ecological applications.



Latin Name
The genus name *Balsamorhiza* is based on the Greek *balsamon*, balsam + *rhiza*, root, alluding to the thick root with a sticky, balsam-like resin in the bark. The specific epithet *sagittata* refers to the arrowhead-shaped leaves.

English Names
Arrow-leaved balsamroot (arrow-leaf balsamroot), spring sunflower, wild sunflower. The name “spring sunflower” is commonly used in local communities around the southern interior of British Columbia where the plant covers sunny south facing slopes with yellow flowers in the early spring (April-June).

French Name
balsamorhize à feuilles sagittées

Morphology

Arrow-leaved balsamroot is a long-lived, herbaceous perennial that usually starts its annual growth in March, flowers in April, and produces mature fruits by early to mid-summer. The successful establishment of new plants is slow, gradual or rare. Generally new plants require 3 to 4 years from seedling to first flowering on the best sites and 7 to 8 years on drier sites.

Arrow-leaved balsamroot grows from a deep-set, thickened, tapering, woody taproot. The root is crowned by numerous dark-grey dried leaf and flower stalks of former years. It can grow to several centimeters in diameter and up to 60 cm in length. The resinous taproot secretes a balsam-like resin and gives off a turpentine-like odour. The taproot allows the plant to store reserves of energy through the dormant season, permitting rapid growth of the foliage and flower buds in the early spring. The arrowhead-shaped, triangular or heart-shaped leaves are up to 30 cm long and 15 cm wide, and form a basal rosette. Due to a dense covering of

Ethnobotany, the study of the interrelationships between people and plants, has changed from simply documenting names, uses and past cultural roles to applied research focused on future applications that benefit Indigenous Peoples. Recent studies of arrow-leaved balsamroot provide a good example of this trend.

woolly hairs, the leaves appear whitish or pale green, especially beneath. The plants usually have several erect or ascending, woolly flower stalks up to 80 cm high. The large and showy flower heads, 6–10 cm across, resemble sunflowers, and are almost always solitary. The outer (ray) flowers of the head are bright yellow, up to 4 cm long. The central (disk) flowers of the head are small, numerous, and deep yellow. Flower heads mature continuously over several weeks, with large plants producing 30 or more. The achenes (single-seeded fruits) are 7–8 mm long, three- to four-angled, smooth, and without bristles or scales. Arrow-leaved balsamroot reproduction occurs predominately by seed, although some plants may arise through offshoots from the taproot. The seed is likely spread by animals. Seed production can be quite high, but varies greatly from year to year.



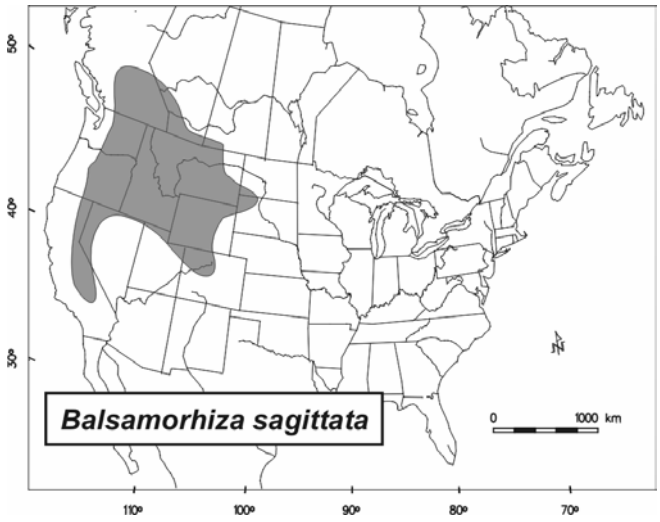
Field of flowering arrow-leaved balsamroot at Botanie Valley, British Columbia.

Classification and Geography

There are 11 species of *Balsamorhiza* in North America. *Balsamorhiza sagittata* hybridizes with *B. careyana* (Carey's balsamroot), *B. hookeri* (Hooker's balsamroot), *B. incana* (hoary balsamroot), *B. rosea* (rosy balsamroot), and *B. serrata* (toothed balsamroot).

Balsamorhiza sagittata is the most abundant balsamroot species in the intermontane area (between the Coastal Ranges and the eastern front of the Rocky Mountains). It is found only in western North America, occurring along the east side of the Cascades from central British Columbia south to California and east through Nevada, to Colorado, Saskatchewan, and the Black Hills of South Dakota.

The only other species of *Balsamorhiza* found in Canada is deltoid balsamroot (*B. deltoidea*), which is confined to six locations on southeastern Vancouver Island. It differs from *B. sagittata* in being sparsely hairy instead of densely hairy. The plant is considered endangered by the British Columbia Conservation Data Centre and has been recommended for threatened status in Canada. More than half of the historically known populations are extirpated. The Garry oak (*Quercus garrayana*) woodland habitat where deltoid balsamroot occurs is greatly reduced. Existing populations are threatened by overgrowth of alien species, particularly Scotch broom (*Cytisus scoparius*) and by browsing of introduced rabbits. Some populations are protected to a degree.



Ecology

Arrow-leaved balsamroot typically occurs in large patches on open grassy or sagebrush slopes and in open pine woodlands. It grows predominately on flats and open hillsides at low to mid elevations (300 to 3,000 m), especially on open, warm, sunny slopes in Douglas-fir and aspen forests. Associations in which arrow-leaved balsamroot is prevalent include: elm–ash–cottonwood, Douglas-fir, ponderosa pine, fir–spruce, lodgepole pine, western mixed hardwood, sagebrush, chaparral–mountain scrub, pinyon–juniper, mountain grasslands, and plains grasslands. The plants generally develop best in bright sunlight, and their growth may be suppressed if a forest canopy closes over them. Rapid production of extensive foliage in early spring may enable them to compete effectively for light.

Arrow-leaved balsamroot increases in frequency, density and size after fire. On a burned area in north-central Idaho arrow-leaved balsamroot plants were, on average, 22% taller than plants in unburned areas. It has been shown that the species may remain in a community for many years in a suppressed state until a fire occurs.

Mule deer eat arrow-leaved balsamroot year round. Bighorn sheep graze extensively on the plant, without apparently reducing its vigour. Arrow-leaved balsamroot is also valuable winter and spring forage for Rocky Mountain elk. Deer mice and blue grouse exhibit a preference for arrow-leaved balsamroot seeds. The plant also provides cover for wildlife species, including small mammals, small non-game birds and upland game birds such as blue grouse. The flowers provide a food source for hummingbirds, butterflies, and many other insects.

Use as Food

All parts of arrow-leaved balsamroot plants have provided food for Indigenous Peoples. The plant furnished food during most of the year, different parts becoming available with each season. When the plant is mature, its leaves and flowers are tough and inedible, and the whole plant has a strong, bitter taste.

The roots were the most important source of food. All of the Interior Salish groups ate the roots, as did the Tsilhqot'in and Ktunaxa peoples. The roots must be cooked for a long time to make them edible; otherwise they are woody and stringy. Traditionally the roots were subjected to long, slow pit-cooking in an earth oven, a process that dates back millennia. The carbohydrates in arrow-leaved balsamroot roots are dominated by the complex sugar inulin. Jerusalem artichoke (*Helianthus tuberosus*) and other members of the aster family (including chicory, dandelion. thistles and dahlia) also produce inulin in their root as a major storage carbohydrate. Cooking inulin-containing roots increases their digestibility and sweetness for humans by converting inulin to simpler sugars, fructose and fructans. Cooked roots were eaten immediately or dried for storage. Many indigenous people regarded the cooked roots as a treat or dessert. The plant, especially the root, has good nutritional value. Large quantities of roots were eaten.

The very young shoots were harvested in the early spring. They were eaten raw, sometimes dug up from



Horse eating arrow-leaved balsamroot at Hat Creek Valley, British Columbia.

under the snow, and considered to be a good famine food because they were available when few other foods could be found. The young flower stems were eaten in April and May when the flower buds were still tightly closed. They were gathered, peeled and eaten raw, steamed, or boiled. They have a pleasant nutty taste, and an aroma reminiscent of young sunflower seeds. Some Indigenous Peoples also peeled and ate young leafstalks raw in the spring. Various green parts of the plant, including stems, leaves, and bud-stalks, were used as potherbs. These plant parts contain carotene and other vitamins, as well as minerals such as iron, calcium and magnesium.

Arrow-leaved balsamroot “seeds” (achenes), similar to sunflower seeds, were pounded and used as flour or meal, mixed with berries, or added to soups and puddings. The seeds served as a source of protein,

fat and carbohydrates.

Toxicity

Although arrow-leaved balsamroot is not considered harmful, some people have noted that eating too many roots may cause drowsiness. The terpenes and other compounds (e.g. thiophene) in the mature leaves and roots that give the plant a resinous odour may be harmful if consumed in large amounts and may potentially be phototoxic.

Medicinal Uses

Indigenous Peoples used arrow-leaved balsamroot extensively in the past as medicine, and it is still used medicinally today. Different parts of the plant had distinctive applications. The part most extensively used for medicine (as well as for food) was the root. It has been characterized as antimicrobial, disinfectant, expectorant, sedative, analgesic, antirheumatic, diaphoretic (promotes perspiration), cathartic (a strong laxative), immune stimulant (similar to *Echinacea* but milder), and nutritional.

A poultice of the root paste was applied to burns, wounds, cuts, and bruises by many tribes. The pitch from the root bark was traditionally used in the interior of British Columbia to make a salve for skin infections and wounds. Among the Secwepemc, the resinous roots are still important today in treating a variety of skin ailments, including infections. The Cheyenne boiled the roots, stems, and leaves and drank the decoction for stomach pains and headaches, as well as steaming the plant and inhaling the vapors for the same purposes. The root stimulates salivation and bronchiole activity, and softens dried mucus of the lungs, and was used by several tribes in the treatment of tuberculosis.

The roots contain a variety of compounds that likely are responsible for their many medicinal uses. An antibacterial compound (belonging to the thiophene group of toxic chemicals) was recently isolated and purified from the raw roots. The complex carbohydrate inulin may stimulate the growth of beneficial bacteria in the intestine. An extract of arrow-leaved balsamroot has exhibited broad spectrum activity against at least ten kinds of bacteria. Arrow-leaved balsamroot extract has been found to suppress nine species of fungi.

Other parts of the plant have also been valued medicinally. The leaves have antibacterial properties, useful for treating sores, rashes, and poison ivy.



Root harvester and arrow-leaved balsamroot at Botanie Valley, British Columbia. Photo from early 1900s.

Powdered leaves were once used on wounds to reduce infections, and smoke from the leaves was inhaled as a treatment for headaches. The achenes were eaten to relieve dysentery.

Importance for Ecological Restoration

Arrow-leaved balsamroot is native to Western North America, is well adapted to a number of ecosystems, is drought tolerant, and is ecologically significant. It is consequently well suited for restoration of many sites in the Interior Plateau of British Columbia. This species is also under investigation for use in oil-shale and coal-mine reclamation, as well as for soil stabilization. The plant is a dominant forb that serves as a food source for many animals (see Ecology). In

many communities a major portion of total forage production is furnished by arrow-leaved balsamroot alone. Recent research at the University of Victoria is aimed at developing arrow-leaved balsamroot as a seed crop to expand its use in ecological restoration. Information on establishment and management on disturbed sites is available.

Forage Value

The appearance of flowering arrow-leaved balsamroot is useful as an indicator of readiness of a range for livestock grazing. It has fair palatability for all classes of livestock, and is important as forage because it develops early and is often abundant. Flower heads are preferred over the foliage. One often encounters plants with bare stalks missing their flowers, which have been eaten by deer or other animals.

The nutritional value of arrow-leaved balsamroot as forage has been rated fair in energy and poor in protein. In Idaho, it was found to have sufficient protein to meet requirements for domestic sheep during June and July. Arrow-leaved balsamroot exceeds required calcium levels but is deficient in phosphorus.

The effects of grazing on this plant vary. Grazing by domestic sheep has led to a decrease in the abundance of arrow-leaved balsamroot in some areas of Interior British Columbia. It is not very successful at reproducing on heavily grazed ranges, probably because the seeds were low in viability and grazing of flower heads reduces the chance of producing an adequate seed crop. Low rates of reproduction in response to grazing may also be caused by soil compaction and trampling, which reduce seedling establishment.

In southern British Columbia a number of livestock exclosures have been constructed to assess the recovery rate of vegetation previously grazed. Observations and measurements indicate that arrow-leaved balsamroot plants inside the exclosures are larger. A rest period of 20 to 40 years is required for overgrazed ranges in the rough fescue and ponderosa pine zones of southern British Columbia to recover to excellent range condition.

Other Uses

The leaves were smoked like tobacco, and the burning leaves were also used to fumigate a room. The Blackfoot burned the root as incense for ceremonial occasions. The fibrous dried roots were used as a “slow match” to hold coals and to kindle a fire.

In the winter, the Okanagan stuffed the large, hairy leaves in their moccasins to keep their feet warm. The leaves were also used as slippers to teach children how to walk softly. Young Okanagan boys training to acquire supernatural power would wrap the leaves around their feet, pinning them on with bluebunch wheatgrass stems, and walk on them to see how far they could get without tearing the leaves. This exercise prepared them for walking silently in the woods.

Prospects

There are two principal economic potentials of arrow-leaved balsamroot. First, as noted above, the plant has considerable value as a rangeland component, as well as for restoration and reclamation. Second, there is potential as an herbal medicine, in the light of its considerable use by Indigenous Peoples, and demonstrated anti-biotic properties. The plant is attractive and hardy, and could be developed as an ornamental. It also has some potential as a new vegetable and inulin source.

Myths, Legends, Tales, Folklore and Interesting Facts

Arrow-leaved balsamroot is featured in a prayer that the Nlaka’pamux of British Columbia addressed to the Sunflower-Root when it is harvested: “I inform thee that I intend to eat thee. May thou always help me to ascend, so that I may always be able to reach the tops of mountains, and may I never be clumsy! I ask this from thee, Sunflower-Root. Thou art greatest of all in mystery.” Failure to recite this prayer before eating was said to “make the person partaking of the food lazy.”

Several rituals relating to harvesting and processing of arrow-leaved balsamroot have been documented. Nlaka’pamux women had to abstain from sexual intercourse during the season of root harvest. A man was not to come near the cooking pit while the roots were being cooked. Women painted their faces red, or painted a large black or red spot on each cheek before harvesting the roots. Prayers were offered when people went to dig plants. There were taboos against a bereaved spouse eating arrow-leaved balsamroot for a whole year after the bereavement.

The leaves were used in puberty rituals for girls. An infusion of the root is reputed to grow hair on bald heads.

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Arrow-leaved balsamroot at Scheidam Flats, near Kamloops, British Columbia.

Book Review
Revue de livre

African Traditional Medicine — A dictionary of plant use and applications.
by H.D. Neuwinger, 2000
Medpharm Scientific Publishers, Stuttgart, 589 p.
ISBN 3-88763-086-6
Price: 101,20 €

Hans Neuwinger is most likely recognized as a scholar of medicinal plants from his 1996 treatment of the coincidental use of botanicals as arrow poisons and medicines in *African Ethnobotany, Poisons and Drugs* (1996). The feature that sets this treatise apart from the first work as well as related books (i.e. Iwu's 1993 *Handbook of African Medicinal Plants*) is its comprehensive scope. The author's most recent contribution is capacious in both the number of plant species and number of medical entries included.

First, *African Traditional Medicine-A dictionary of plant use and applications* contains an exhaustive 5 400 plant species (over 35 times more species than Iwu's treatment) that are used medicinally throughout Africa, as well as a glossary of medical terms. As the title states, this book is arranged in dictionary format, with plants listed alphabetically by their Latin binomial (with the authority included) followed by numbered entries on medicinal application. Although the listed plants are used primarily as treatments, extra entries are often included. For example, *Parkia biglobosa* is used for a variety of afflictions, but also as a coffee substitute ("Sudan coffee").

African Traditional Medicine also stands out for its well organized medical index "*Search System for Diseases"*. This supplemental booklet is an alphabetical list of conditions that range from the uniquely African (trypanosomiasis, sickle cell anemia) to cosmopolitan (rheumatism) to topics that are not strictly medical (snake repellent). The supplement is designed as a list of plant names (by first letter of the genus) and entry number, arranged after individual medical conditions. This allows rapid access to the often large number of plant species that are used for particular diseases. Conversely, sometimes one plant is used for numerous treatments (e.g. *Jatropha curcas* has over one and a half pages of medical entries). Although well designed, the "*Search System for Diseases"* really should have been hardbound to the main body of work, as readers will probably be in constant fear of losing it.

People familiar with Neuwinger's earlier work may be disappointed by the lack of graphics and chemical structures. However, the author is unapologetic for this in the introduction, and I believe that the emphasis on botanical and medical completeness is appropriate for its intended use (a general reference). Actual problems are noticeable in the odd Latin binomial that is not completely in bold and in the References section. Unfortunately, the book falls a bit short in this department, as some references are not spelled correctly (e.g. Bath and Jacobs) and others are missing altogether (e.g. Watt and Breyer-Brandwijk). Also, the method of organizing multiple entries by the same author appears to be haphazard as opposed to the conventional chronological listing. Although this does not greatly detract from the utility of the book, it would force readers that require the original citations to do extra work.

The author makes a timely plea in the introduction for the preservation of knowledge that is orally based and the application of this knowledge to the discovery of new drugs. This volume undoubtedly helps in the achievement of both of these goals. It is likely that the information contained in *African Traditional Medicine* will aid in the identification of new drug leads, as a cursory scan of literature within the Biological Abstracts database revealed that several plants listed in the book had 2 or less "hits" (and these often had nothing to do with secondary chemistry or biological activity).

Neuwinger suggests that *African Traditional Medicine* would be useful to phytochemists, bioprospectors, ethnobotanists and anthropologists. Because of this work's ambitious scale and thorough treatment of the subject, I would have to agree.

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espèces d'avoine et sur la génétique de l'avoine. Il a également aidé à nous faire comprendre la génétique de la stérilité mâle et des mécanismes d'auto-incompatibilité dans la famille des moutardes, y compris chez le radis, le chou, le brocoli, le chou-fleur et le colza. Le matériel génétique et l'information qu'il a produites ont servi aux chercheurs de toutes ces cultures en leur fournissant, par exemple, une base de référence pour l'amélioration du canola hybride, maintenant une importante culture canadienne.

En 1974, il s'intéresse au blé et devient le sélectionneur de blé d'automne de la FEC. Il a produit la variété fourragère 'Valour' (enregistrée en 1981) et les blés d 'automne de pâtisserie 'Gordon' (1980) et 'Harmil' (1990). Cependant, sa plus grande réalisation a été le lancement subséquent du programme d'amélioration de la FEC pour le blé d'automne tolérant ou résistant à *Fusarium*. Il a découvert le 'Frontana', une variété brésilienne résistante, puis procédé à des croisements. Il a ensuite commencé à faire des sélections en vue de découvrir un blé résistant à *Fusarium* qui serait adapté au climat canadien. Au moment de sa retraite en 1991, ses travaux de sélection initiaux ont produit des parents pour les nouveaux croisements effectués par Radhey Pandeya du CRECO. Ces hybrides ont donné un blé résistant à *Fusarium* qui semble prometteur et pourrait s'avérer une grande réalisation pour le secteur.

En tant qu'attaché de recherche honoraire, Dexter a poursuivi sa carrière scientifique avec courage et persévérance. Il a étudié la possibilité de domestiquer le Einkorn, une espèce primitive de blé, pour les personnes qui sont allergiques aux blés indigènes traditionnels de boulangerie ou de pâtisserie. Grâce à sa collaboration ce secteur a pu faire de grands progrès.

Dexter Sampson possédait des compétences en généalogie, en sculpture, en spéléologie et, plus particulièrement, en relations humaines. Il avait également un très bon sens de l'humour. Il était un homme à l'esprit universel et nous manquera beaucoup comme collègue et comme ami.

Donald Léger
Programme national sur la santé environnementale et la biodiversité, CRECO, Agriculture et agroalimentaire Canada, Ferme expérimentale centrale, Ottawa.

Note du rédacteur
Ce texte a été publié dans le Bulletin de l'Association de Génétique du Canada, vol. 33(4). Dexter Sampson était un membre fondateur de la Société de Génétique du Canada et il a siégé pendant plusieurs années au comité éditorial de la Revue canadienne de génétique et de cytologie (maintenant appelée Génome).

La liste des publications de Dexter Reid Sampson sera publiée dans le prochain numéro du Bulletin de l'ABC, le 36(1).

(suite à la page 47)

Enfin, le troisième point est un appel à tous les membres de soumettre des candidatures pour les prix Georges Lawson et Mary E. Elliot. Votre participation est essentielle. Ce sont des prix importants pour le rayonnement de l'association et des botanistes au Canada. Le prix Georges Lawson vise à reconnaître une personne qui a contribué de façon significative au développement de la botanique au Canada, soit au niveau de l'ensemble d'une carrière ou d'une contribution de grande envergure. Le prix Mary E. Elliot est décerné à un membre qui a servi activement l'association. Pour obtenir plus d'information, veuillez me contacter à vasseurl@umoncton.ca. La date limite pour soumettre une candidature est le 1er février 2003.

Liette Vasseur
Présidente de l'ABC

Un mot du rédacteur / Editor's word

Je tiens à remercier Bill Grant, Paul Catling, Gisele Mitrow, Barbara Spyropoulos et Donald Léger qui ont contribué d'une manière ou d'une autre à rendre possible la publication dans ce numéro d'un hommage à Dexter Reid Sampson comme je le souhaitais dans le numéro précédent.

Pour garder les membres au courant des activités de l'Association, j'ai créé une nouvelle rubrique (voir en page 48). J'espère qu'elle suscitera une certaine émulation parmi les représentants de l'Association ainsi que parmi les membres.

I wish to thank Bill Grant, Paul Catling, Gisele Mitrow, Barbara Spyropoulos and Donald Léger whose collaboration led to the publication in this issue of a tribute to Dexter Reid Sampson. This was in response to my request in the preceding issue; nice example of support to the editor of your bulletin.

In page 48, I added a new item to the Bulletin about current news from the Association. I hope this will be appreciated and will encourage emulation among officers and members of the Association.

NEWS from Conservation Committee

Prepared by Pam Krannitz

The Conservation Committee was established within the Canadian Botanical association/Association Botanique du Canada in 1980 to address conservation concerns of a botanical nature. The bulk of our work has been to write letters in support of conservation actions that preserve Canada's botanical heritage, diversity and integrity.

Committee's Membership

By July 2002, members were Pam Krannitz (BC, and Chair), Sheila Lamont (Alberta and Saskatchewan), David Punter (Manitoba), Keith Winterhalder (northern Ontario), John Ambrose (southern Ontario), Frédéric Coursol (Québec), Heather Stewart (Nova Scotia), Christian Lacroix (PEI), Luise Hermanutz (Newfoundland).

Invasive Species in Horticulture and Agriculture

Pam Krannitz attended a National Workshop on Invasive Alien Species, Nov. 5-7, 2001, Ottawa. The intent of the workshop was to come up with a National Strategy for dealing with the problem. It was very useful for bringing to our attention the scope of the problem, which is huge, and the regulatory agencies and regulations that already deal with some alien species.

Information regarding roadside seeding by Provincial Departments of Transportation was gathered from British Columbia and Québec. Some provinces did not have guidelines for roadside seeding which made it difficult to piece together a National picture, and to find ways that we could contribute to prevent the spread of aliens through roadside seeding. Similarly, each region has different problem species, which again mades it difficult to provide national advice to the horticultural industry. We may still initiate discussions with the Canadian Nursery Association to see how we might work together to prevent the horticultural propagation of alien invasives.

Web-site

Ecology Section web site (http://www.sru.edu/depts/artsci/bio/ecolsect.htm) now has an introductory blurb on the Conservation Committee, and has links to three position papers (in pdf format) adopted by the Association in 1990 : "Transplantation as a means of preservation", "Gardening with wild plants", and "Re-introduction to increase vegetational cover and native species".

Letters

Two letters were written on behalf of CBA/ABC. Joyce Gould, with input from Sheila Lamont, wrote a letter regarding the proposed Meridian Dam in Alberta/Saskatchewan. It was signed by the President and sent off, but as far as we know, no response has been received as of yet. In addition, CBA member Laurie Consaul prepared a letter regarding a development slated for a significant wetland south of Ottawa. Due to time constraints (the municipal council was meeting to vote on whether to commit funds for a stormwater facility for the development) the letter was signed by the Chair, rather than the president. Our letter was well received by a council member who was conservation minded, and he used the detail in our letter to argue why money should not be spent by Ottawa for the development at this site. Unfortunately, council still voted to proceed with the development.

Other

We are always looking for new members and new ideas. Please contact Pam Krannitz at pam.krannitz@ec.gc.ca to become involved.

Please note / À Noter

Please use the corrected adresses for the following CBA officers.
Pour rejoindre les personnes suivantes, veuillez utiliser leurs coordonnées corrigées.

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