Canadian Chestnut Council

. . . on the Chestnut Trail

1332 Suncrest Road
Kingsville, Ontario N9Y 3H3

NEWSLETTER #12
October 1995

The Newsletter, published twice a year by the Canadian Chestnut Council, is available with membership, which is $10.00 per year, payable to the Secretary-Treasurer anytime. Letters to the editor and short articles are welcome.

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Clem Fisher, Secretary-Treasurer
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NOTICE OF ANNUAL MEETING

DATE... **Friday November 3, 1995**

TIME... **1:30 p.m. - 4:30 p.m.**

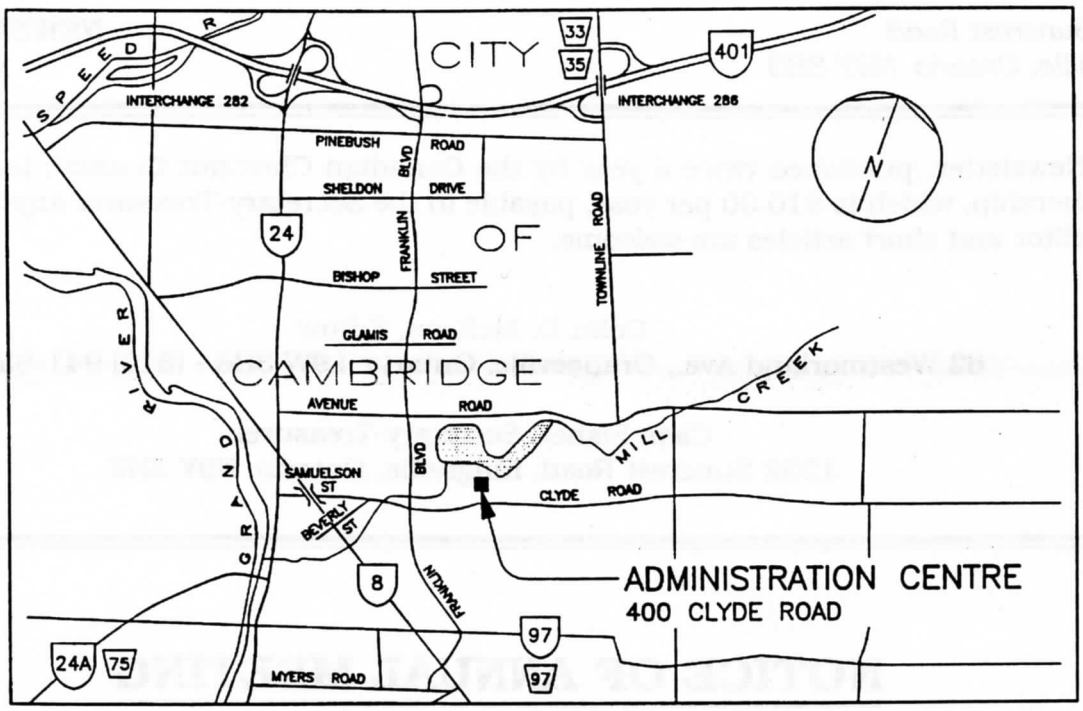
PLACE... **Board Room, Administrative Centre***
Grand River Conservation Authority
400 Clyde Road, Cambridge Ontario

Note... This is a **NEW LOCATION for our Annual Meeting*
See Map & Directions next page.

This will be your only notice... please save this page for Date & Directions.

OVER →

Directions to
ADMINISTRATIVE CENTRE - Grand River Conservation Authority



From EAST on 401...

1) Exit South to Townline Road (Exit 33).
2) South on Townline Road to Pinebush Road (First Light).
3) West on Pinebush to Franklin Road (about 2.2 km).
4) South on Franklin to Clyde Road (about 4.5 km... just before R.R. overpass).
5) East on Clyde Road (about .5 km) to G.R.C.A. (on left). Park in Visitors' Lot.

From WEST on 401...

1) Exit #282 South to Hwy. 24.
2) South on Hwy 24 (about .5 km) to Pinebush Road (First Light).
3) East on Pinebush (about 1.6 km) to Franklin Road.
4) South on Franklin to Clyde Road (about 4.5 km... just before R.R. overpass).
5) East on Clyde Road (about .5 km) to G.R.C.A. (on left). Park in Visitors' Lot.

Comments from the Editor

Included with this newsletter is a brief progress report of the Canadian Chestnut Council (CCC). The CCC has been operating for nearly seven years and claims considerable accomplishments. New demands are being made on the bank of knowledge accumulated. We are anxious to keep our membership informed, not only about our aim to restore the American Chestnut in Canada, but to keep you informed about what is taking place in the U.S. Because the restoration program is advancing well in the U.S. the coverage of U.S. news, programs, etc. is more extensive than usual in this newsletter.

The outlook of the CCC and that of the American Chestnut Foundation are continually being challenged and evaluated. We appreciate your interest and support. We hope that many of you may be able to attend our annual meeting on November 3rd. Let us help one another keep on the path to success!

Colin D. McKeen

An Oldtimer Has Vivid Memories of the Chestnut

The following bits of information about boyhood experiences with the Chestnut were told to the editor a few weeks ago by Orlin Crysler, Fonthill, Niagara Peninsula. Some of his memories take him back nearly 75 years to pre-blight times in Ontario.

The Crysler farm was located on Hollow Road near Fonthill along the Escarpment and was devoted substantially to market gardening. A few thousand staked tomato plants were grown on a plateau along a high ridge on the farm. This site promoted early maturity of the tomato crop. At one side of the plateau, as the terrain falls off into a wooded slope, grew four huge Chestnut trees. Growing mostly in the open the trees had many spreading branches. The lowest branches arising not far from the ground made tree climbing not very difficult. These four trees had trunk diameters of three feet or more and bore heavy crops of chestnuts every autumn.

In late September and early October at nut-drop time, these trees were visited by Orlin and a few school chums nearly every day after school. They were as eager for a taste of the delicious nuts as the squirrels and bluejays. They all knew that the start of a daily drop of a few nuts foretold a heavy nut-fall before long. All were ready for it. Opening burrs shed their nuts, but a limb-shaking at the right time helped the process. Orlin, being a fearless climber, was usually given the tree-climbing task. He can recall memories of limb-shaking that caused the nuts to shower down in prodigious numbers. His brother and one or two school chums gathered the fallen nuts into containers. Orlin recalls nut-gatherings of six to eight, six quart baskets of large shiny chestnuts. At that time a six quart basket of chestnuts fetched $1.50... a prized source of income for a young lad. The nuts were taken by his father to a farmers' market in Niagara Falls and sold.

Orlin tells that after the blight struck in the 1920's, the big Chestnut trees died within three to five years. When totally dead, the trees were cut down, sawed into blocks of wood and later used to fuel the greenhouse furnace.

A few weeks ago Orlin took me to see the only remaining stump of the Chestnut group. After more than sixty years the unrotted portion still measures three feet in diameter. A sturdy rim of undecayed wood remains around the circumference of the stump.

Along with these boyhood memories, Orlin has retained an interest in the native Sweet Chestnut. Today, he has several trees of varying ages and sizes growing on the farm. Blight is still a threatening factor. Attempts at blight control by inoculating with a hypovirulent strain of the fungus have been underway on the Crysler farm for more than six years.

Chestnut panelling in the living room of the Crysler house will forever remind him of the usefulness of that once prominent forest tree.

C.D. McKeen

OVER →

Dr. Charles R. Burnham Dies

Dr. Charles R. Burnham, co-founder of the American Chestnut Foundation (ACF), died on April 19, 1995 at the age of 91. The restoration of the American Chestnut had been a high priority for him since he retired from the University of Minnesota in 1972. He developed the scientific breeding approach being used today at the Wagner Research Farm in Virginia to breed blight-resistant American Chestnuts.

Colin McKeen, Chairman of the CCC, enjoyed several interesting chats with Dr. Burnham while attending Chestnut blight research meetings held annually in eastern U.S.A. over the last ten years.

If Dr. Burnham's strategy for backcross breeding had been used in Chestnut breeding projects carried out earlier in this century in the U.S., blight-resistant Chestnut trees with the stature of Chestnuts of old might well have been growing today in the forests of eastern U.S.A. and southern Ontario.

Annual Meeting of ACF

The 12th annual meeting of the ACF is being held at LaCrosse, Wisconsin, October 20 and 21, 1995. For program details write to CCC or phone (519) 733-5057. During the meeting there will be a field trip to view a magnificent stand of nearly 1400 native American Chestnut trees near West Salem, Wisconsin. Some of these trees have trunk diameters exceeding 36 inches. Within the last ten years the blight has entered this stand and is now causing cankers on sixty trees. In biocontrol experiments starting in 1992, these blighted trees have been inoculated with hypovirulent strains of the blight fungus. Plant pathologists working in the states of Michigan, New York, West Virginia and Wisconsin share in this important project.

Wagner Research Farm, Meadowview, Virginia

The Wagner Research Farm near Meadowview, Virginia, is the main site of Chestnut breeding for blight-resistance in the U.S. This twenty acre farm was donated by the Wagner family to the American Chestnut Foundation in 1989.

Plantings with Chestnut seedlings from backcrosses 1, 2 and 3 used up the entire acreage by 1994. Then, Dr. Fred Hebard, Superintendent and Chestnut breeders at the Farm made known the critical land shortage situation. This year, another benefactor has come to the rescue of the ACF. A hundred acre parcel of land close to the Wagner Farm has been left to the ACF by the Glen C. Price estate. This is expected to meet the critical needs of the Chestnut-breeding project for several years.

There are now 5000 trees growing on the Wagner Farm. These include 69 third backcross trees, approximately fifteen-sixteenths American and one-sixteenth Chinese. There are 2100 second backcross (seven-eights American). There are 250 first backcross trees (three quarters American). There are 350 first hybrids (one-half American and one-half Chinese). As well there are other trees representing other required crosses to complement the breeding program.

Evaluations for blight resistance are now underway on seedlings derived from the third backcross. These young trees are inoculated with the blight fungus. Results of tests carried out to date indicate that this breeding program will yield a blight-resistant tree very much like the American Forest Chestnut of old. It has been projected that ten to twelve years will yield some promising material for field planting. (This information was taken from the 1995 Spring and Summer issues of "The Bark", newsletter of the ACF.)

Chapters of the ACF

Chapters now occur in the states of New York, Connecticut, Pennsylvania, Illinois and Indiana. Chapter activities include such projects as classroom curriculum development, assisting research and organizing membership drives. In New York, the educational program is designed to teach students in their third through fifth grade science classes about the history and the future of the American Chestnut. Pupils are obtaining hands-on experience by planting Chestnut seeds and seedlings. They will thereby feel they have a genuine part to play in restoring the Chestnut.

Chestnut Plantings and Tree Growth in Ontario in 1995

Bruce Graham informs us that the Grand River Conservation Authority Nursery near Burford has grown 2500 American Chestnut seedlings this year. Some of these seedlings may be available for sale in 1996 or 1997. Despite the dry season many of them have reached a height of 24 inches.

Elsewhere smaller plantings and young Chestnut trees have made varying amounts of growth depending largely upon available moisture and care. Being a cool spring, bud break was late. Again it has been demonstrated that Chestnut seedlings do not compete well with grasses and weeds. Until young trees are 4 to 5 ft. high they are unable to overcome grass and weed competition, and thus achieve only 25 to 30% of their potential growth. Once a height of 5 to 6 ft. is reached, young trees increase their height by 2 to 4 ft. per year when growing in sunny exposures. Therefore, clean cultivation for 24" to 36" around the young tree is essential until the 5 ft. height is attained.

Young trees exhibit much variability as to the time of first production of flowers and burrs. Young trees showing good growth may begin to flower in their fourth to sixth year. Others growing equally well may not produce any burrs until ten to fifteen years of age, even later, or not at all.

Use of Growth Protectors

Young seedlings and small trees benefit from some kind of protection from rodents and the browsing of deer. If unprotected, bark-girdling by rabbits will often kill young trees back to the ground level. Fine wire mesh placed around the trunks has satisfactorily prevented girdling by rabbits and mice. Wire mesh or plastic protectors, if 4 to 5 ft. high, will prevent the browsing of deer and thus give young Chestnut trees a good start.

Plastic protectors have some weaknesses. On hot summer days the temperature inside the tubes often rises several degrees above the ambient temperature outside. Consequently, adequate soil moisture must be maintained to sustain tree growth. Also plastic protectors delay the hardening-off process, and as a result the bark and woody tissues are not adequately prepared for the cold winter. Increased hardiness can be achieved by raising the plastic protector about two inches above the soil for four or five weeks in the late autumn. This creates a draft through the chimney tube preventing heat build-up. The bottom edge of the tube should be lowered again into the soil just before soil freeze-up.

Harvest of Nuts from American Chestnut Trees

Nuts are produced by a few solitary trees and rarely or not at all by others. Although Chestnut trees produce both male and female catkins, it has been maintained that they are not self-fertile. It has been found that a few trees are moderately self-fertile and produce nuts without cross-pollination from another tree.

Burrs containing one, two or three plump nuts are not normally shed until most of the empty burrs have fallen. If the bluejays and squirrels are active around Chestnut trees from mid-September until early October, it is a good indication that mature nuts are forming and will soon be shed.

Nut Storage

After a short dry-down period of about ten days in an unheated building they should then be enclosed in a clean heavy plastic bag (milk bag) in a 50% mixture of peatmoss and sand. The mixture should be slightly moist. Winter storage should be in a vegetable crisper compartment of a refrigerator held at about 2° to 3° C. Nut germination usually begins in March or April. Germinated and non-germinated nuts may be planted in containers indoors, or later in the field. Do not wash or attempt to surface-sterilize the nuts before storage.

Annual Meeting of CCC

The annual meeting of the CCC is being held on Friday afternoon, November 3rd at the Grand River Conservation Authority Headquarters, 400 Clyde Road, Cambridge, Ontario. Dr. Fred Paillet of Denver, Colorado will be the guest speaker. Dr. Paillet has been a member of the ACF for many years and has written several popular and scientific articles on the Chestnut. He has recently returned from a visit to a thriving stand of non-blighted European Chestnut trees in a nature preserve in the Caucasus Mountains in southern Russia. Dr. Paillet is currently doing an ecological study of a non-blighted stand of American Chestnut trees in Northwestern Illinois. Along with reports of ongoing blight control research in Ontario and an opportunity to ask questions about Chestnut regeneration this promises to be a very interesting meeting. Mark November 3rd on your calendar and plan to attend the meeting.

Canadian Chestnut Council

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