

TREE CARE FACES INCREASING



EVEN THOUGH wide support could be generated for the position that trees are among the world's most important heritages, forces are at work that make preserving that heritage increasingly difficult.

This thread of concern wound its way through many of the papers presented at the International Shade Tree Conference in mid-August at Rochester, N. Y. The 46th gathering drew a record crowd of 851, surpassing the 1965 Washington meeting of 816. Thirty companies exhibited in Hotel Flagship-Rochester and about half demonstrated equipment in Genesee Valley Park.

According to some speakers, we have experienced over-reaction, and a short-sighted reaction to a condition described by Dr. James G. Horsfall as "an environment that's beginning to fight back."

The danger we must avoid as we deal with environmental problems, cautioned Dr. James Afflect, is that "We must not — we cannot let the human population be controlled by the balance of nature."

Parable of the Commons

While Dr. Horsfall's talk was not billed as a summary of the convention, it did serve to wrap up the alternatives that man has in regulating his surroundings to his benefit. Practically all of the papers presented fit into one of four

options that Dr. Horsfall suggested.

A plant pathologist, director of the Connecticut Agricultural Experiment Station and chairman of his state's environmental policy committee, Dr. Horsfall likened environmental problems to what he called the "Parable of the Commons." He referred to the early-day practice of allowing a prescribed number of villagers to pasture livestock on village property—"according to the carrying capacity of the commons."

When the carrying capacity of the commons is surpassed, problems will occur. In some areas, he said, there are just too many automobiles and too many people; consequently there is pollution of various sorts.

Options available to deal with the over-capacity of the commons, said Dr. Horsfall, are:

1. Applying science and technology to delay the collapse of the commons, or to increase the carrying capacity;
2. Educating the users of the commons on its proper use;
3. Limiting the use of the commons by legislation;
4. Limiting the users of the commons, or, in present terminology, getting the population in line with the environment.

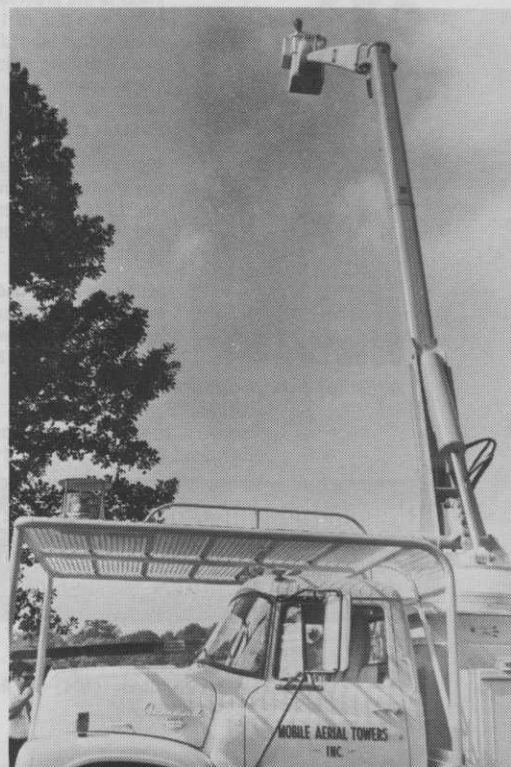
Dr. Horsfall sees the greatest activity in the first two options, simply because "they do not interfere with our freedoms."

Though man is given dominion

over the environment in Genesis, Dr. Horsfall said, our age has become so extraordinarily complex that he no longer can do exactly as he pleases. Those today who seek the destruction of society without offering solutions to its ills "would starve to death before they could put it back together," he added.

Chemical Bans Shortsighted

As an example of the short-sightedness of the new breed of



OBSTACLES

Genesee Valley Park, Rochester, N.Y., appeared to harbor a giant metal octopus the day of field demonstrations for the International Shade Tree Conference in mid-August. Aerial lifts, such as the Skyworker, left, provided the roaming tenacles; and occasionally a whole tree was lifted from the ground, in this case by the big Vermeer tree spade.



ecologists, Dr. James Affleck, general manager of the agricultural division of American Cyanamid Company, cited one result of the DDT ban — forest defoliation by the gypsy moth.

“My home state (New Jersey) has had a 20-fold increase in two years, from 5,000 acres defoliated in 1968 to well over 100,000 this year. According to the USDA, the gypsy moth last year defoliated 260,000 acres of woodland in the U.S., three

times the acres destroyed the previous year.”

Plant protection experts, he said, point out that a single defoliation has been known to kill white pines, spruce, and hemlock. Two defoliations can kill most hardwoods.

Defoliated forests also increase fire and erosion hazards, adversely affect stream flow, reduce land and recreational values and destroy wildlife habitats.

This seemingly missionary zeal to ban broad spectrum pesticides currently in use will lead to more serious disasters, he continued, to include reduced food production and increased famine.

Dr. Affleck stated Cyanamid does not produce or market DDT or any of the other persistent, chlorinated hydrocarbon pesticides currently under fire and expects to profit from their curtailed use. However, he said, “I must warn that we are moving far too rapidly to restrict the use of these products before we have developed others to take their place.”

He termed the “balance of na-

ture” a continuing series of catastrophes in which life forms are wiped out by disease or starvation.

Not all our environmental problems are pollution problems, he stated. “If we can be a little patient, we will solve most of our problems in the area of pesticides.”

In the meantime, he urged his listeners to stimulate correct use of today’s chemicals, to take an active role in the scientific and political arguments in which environmental problems will be measured and solutions devised and accepted; and to speak out against unreasonable, unscientific, or unfounded attacks on the “vital elements of today’s life.”

Policy on New Pesticides

Dr. Ernest A. Walker of the pesticide registration division of USDA’s Agricultural Research Service, reported on what Secretary of Agriculture Clifford Hardin said his department will be looking for as new pesticides are being registered:

—The period of time and the conditions under which the product will persist in the atmosphere;

—Whether the product is likely to be moved out of the area of use because of solubility and mobility, and what potential effects may be anticipated;

—Whether the product is transformed into other chemicals which might have adverse effects on the

Some aerial lifts were old friends to ISTC members, such as the Hi-Ranger from Mobile Aerial Towers. Others were hopefully new friends, one being the Versalift at near left. Joseph M. Cordero, left, is president of Versalift Sales Co. Asplundh Chipper Co. and Baker Equipment Co. also demonstrated lifts.





environment, and on living man, useful vertebrate and invertebrate animals, and on useful vegetation; —Whether there is a need for the product for essential uses for which there is no alternative available;

Systemic Fungicides for Trees

As with most controversies, there are some positive results emerging from the pesticide-pollution-environment arena. Several papers reflected the spurred research effort across the country, much of it attacking old problems from new directions. In the words of Dr. Horsfall, renewed effort is taking place to delay the collapse of the commons or to increase its carrying capacity, that is, Option No. 1.

Dr. Winand K. Hock reported on systemic fungicides for controlling vascular disease in shade trees, such as Dutch elm disease, oak wilt, verticillium wilt, and mimosa wilt.

“Our approach to control these diseases has always been indirect,” said Hock. “We rely heavily upon insecticides to control vectors; sanitation to remove sources of infected wood and to destroy breeding haunts; fumigants to sever root grafts; and fertilization and other cultural practices to offset effects of the disease.”

Legislation against insecticides and sanitation costs are forcing us to seek alternatives, he said, including the development of agents that have a decisive impact on the pathogens themselves.

Hock said that although recommendations cannot yet be made nor have products been registered, “finally, we appear to be on the threshold of developing such materials.”

At Virginia Polytechnic Institute, Hock reported, symptoms of Dutch Elm disease were retarded in America elms treated with either benomyl or thiabendazole prior to inoculation with *Ceratocystis ulmi*. Benlate is the trademark name of benomyl, owned by DuPont Company, Wilmington, Del.; Mertect is the tradename for thiabendazole, owned by Merck Chemical Company, Rahway, N. J.

Connecticut Agricultural Experiment Station found that benomyl reduced foliar symptoms of *C. ulmi* an average of 89% and that protection lasted 10 weeks, more than

Richard E. Abbott, out-going ISTC president tries a Limb-Lopper under the watchful eye of sales representative Bob Bennett. Below, Francis F. Darrow checks out a Homelite saw to see that everything is working properly.

enough time to protect the trees throughout their maximum period of susceptibility.

Dr. Hock reported of successes with benomyl also at the Delaware, Ohio, Shade Tree Laboratory, where he is stationed. Elm seedlings, one, two and three years old, were treated twice a week with 200 ml of either a 500ppm or a 1,500ppm active aqueous suspension of benomyl applied as a sand drench. After four applications, each tree was inoculated with spores of *C. ulmi*. Seedlings then received eight additional benomyl treatments. Five days following the final treatment, the seedlings were examined for foliar symptoms and stem sections were cultured to determine the presence of *C. ulmi*. The results:

“Forty-three percent of the untreated plants exhibited symptoms of Dutch Elm disease compared with 1.7% of the treated plants,” reported Dr. Hock. “Even more striking was the contrast between treated and untreated trees in attempts to isolate *C. ulmi* from the wood. We were unable to isolate the fungus from any of the 60 treated plants; whereas, we isolated the fungus from 80% of the untreated trees.”

Urban Forestry Education

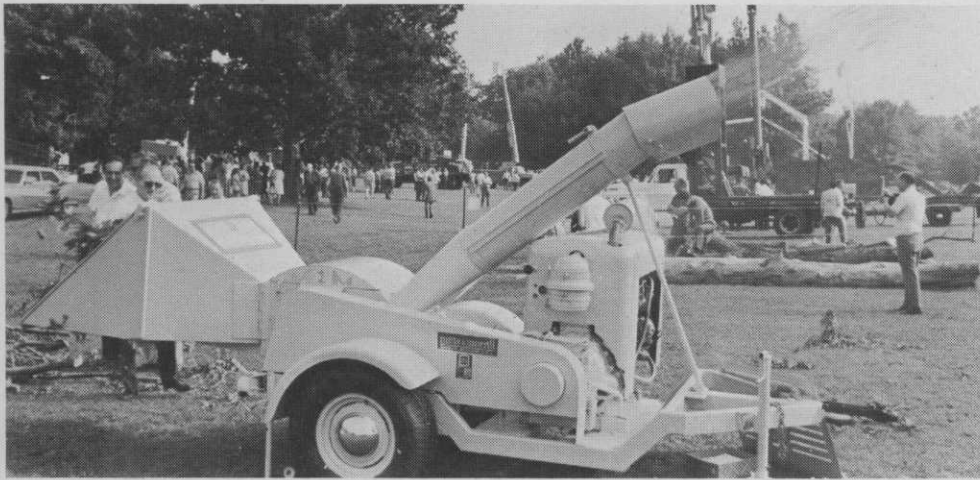
Canada has taken a lead in educating the public concerning the proper development and use of the tree commons. Prof. Erik Jorgensen of the University of Toronto talked about the urban forestry education program that has evolved “since programs of planting trees other than for lumber production began sometime in the 1860s or 70s.”

Urban forestry curriculum has been added to the Shade Tree Research Laboratory, established in 1962 as a part of the Faculty of Forestry, he said.

Jorgensen defined urban forestry as a “specialized branch of forestry that has as its objective the cultivation and management of trees for their present and potential contribution to the physiological, sociological, and economic well-being of urban society. These contributions include the over-all ameliorating effect of trees on their environment, as well as their recreational and general amenity value.”

In shorter terms, he described it as tree management in an entire area influenced by and utilized by the urban population.

In 1965, Jorgensen said a graduate course in urban forestry was added. Course lectures and seminars, heavy on student participation, focus on:



Chips fly from a Mitts and Merrill chipper, one of three demonstrated. Others were the Asplundh chipper and the Wood/Chuck, made by Safety Test & Equipment Co.

—The interaction between trees and their environment;

—Cultivation and maintenance of trees under different environments;

—Human relationships to the environment and especially to trees.

Urban forestry was first offered as an undergraduate course in 1969, for the first time bringing forestry students and landscape architects together. The value of this academic marriage, Jorgensen said, is that it "opens the eyes of the students to his responsibilities to society as a whole. He learns to understand that the growing of trees is far more than the mere production of wood products."

Among research projects under way, Jorgensen discussed the vegetative reproduction of trees. Work is promising with maples, he said. Several clones have been established

and are operated as "living tree shows."

Eventually, tree growers would get cutting material from clonal plantings from commercial nurseries. Disease-resistant varieties of elms might be propagated in this manner, he said. "And we hope to get one or two frost-resistant honey locust from 6,000 seedlings."

Present objectives, Jorgensen said, "are to conserve and propagate the valuable material — in particular, their genes. Later we might use the material for breeding by hybridization."

Concluding, Jorgensen reminded that urban forests are unique in that they are man-made. They lack over-all design and statement of purpose for proper management.

"It is none too early for us to learn to appreciate and manage our urban forests," he said. "It takes 100 years for maple to mature, but it can be

destroyed in a few minutes. It cannot be resurrected, for there are no instant mature trees."

Tree-Removal Cost-Sharing

One of the major problems of managing the urban forest, compounded by Dutch Elm disease, is tree removal. Granger Green, operations superintendent, outlined the cost-sharing tree removal program that his company, Rochester Gas and Electric Company, participates in.

With thousands of dead elms and maples in the city and the cost for removing a typical big tree determined to be around \$475, a cost-sharing program seemed a necessity, Green said. Since tree removal would benefit the telephone company and homeowners, these groups were approached and accepted the idea. Tree removal costs had been borne entirely by the telephone, gas and electric utilities, Green said, so the largest hurdle was re-educating the public. Television was used, but on-the-spot discussions with homeowners were most successful, he said. About 90% were happy to share the cost, Green added. Monroe Tree Surgeons, Inc., received the contract for actual tree removal. The system works this way:

A Monroe Tree representative contacts the homeowner to obtain written approval for cost-sharing and to estimate the price of removal. Then light and telephone representatives visit the site to determine who benefits most and therefore who pays the bigger percentage of the cost. Usually each utility will share between one-fifth and one-third of the cost, Green said.

"We've been very satisfied," Green said. "A 50% reduction in

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Fred Micha, vice-president of sales, Monroe Tree Surgeons, was general chairman for the 46th ISTC record meeting. Leadership for the coming year is, from the left: John A. Weidhaas, Jr., of Blacksburg, Va., vice-president; Dr. E. B. Himelick of Urbana, Ill., executive director; H. M. Van Wormer of Richmond, Va., president-elect; Richard E. Abbott



of Canton, Ohio, immediate past president; J. A. Kimmel of Toronto, Canada, president; Dr. L. C. Chadwick of Columbus, Ohio, executive director emeritus; and E. C. Bundy of Urbana, Ill., executive secretary. Dr. Dan Neely, not pictured, is the new editor of the ISTC newsletter.



LAST ISSUE, we chose a poem from the International Shade Tree competition that was appropriate to the editorial subject. Following is the poem that judges selected as the grand winner:

When I climb trees,
The silly old bees
Sting my fannyoo-e.

When the wind blows,
My foot gets stuck.
How do I get out of this
Silly old rut?

But the sting of a bee
Helps me!
Out I fly from the
Beautiful tree.

Down, down, down.
Good grief!
Crunch in the leaves,
What a relief!

The author is Steve Coffin, fifth grader at Wayne Central School in Ontario, N.Y.

* * *

FRED K. BUSCHER, Ohio Extension horticulturist, reports that Agricultural Research Service personnel at Beltsville, Md., have confirmed a new way to control slugs. They found from a four-day test that stale or fresh beer placed in a shallow pan caught more than 300 slugs, compared with only 28 caught with the standard slug bait containing bran, an arsenical, and an attractant called metaldehyde. Researchers, performing autopsies on the dead slugs, revealed their stomachs "loaded" with beer.

* * *

THE 10,000TH GOLF COURSE opened for play July 31. According to the National Golf Foundation, the nation's source for golf information, the honor goes to Rancho Canada (East Course) Golf Course in Carmel Valley, California. Owned by professional Nick Lombardo, the course has a 6,600-yard, par 72 track. Robert Putman was the architect.

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ONE ACRE OF GRASS — about half of the front lawns in a block, says Dr. H. John Carew of Michigan State University, has the cooling effect of a 70-ton air-conditioner. "The cooling effect is caused by a loss of water from the grass," he explained. "On a single summer day, an acre of grass will lose about 2,400 gallons of water through transpiration and evaporation."

Tree Care Faces Increasing Obstacles . . .

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costs for removal of dead elm and maple trees has been realized from this program."

Time Study of Tree Trim Costs

An extensive time study of tree trimming by West Penn Power Company has shown that: three-man crews were most productive; that a round-over clipped trim took 3.6 times longer than a natural-look trim; that production can vary widely from time to time between contractors and even crews; that exact specifications for work and periodic supervision can increase production.

J. Frank Wagner, forester for West Penn Power, said that of 244 timed tree trimming observations, the mean trimming time was 84 man-minutes, with a standard error of plus or minus 6%.

Part of instructions to contractors suggest that they approach each tree in a way to reduce its height with no more than 12 cuts that are staggered throughout the tree and shaded by other limb structures.

As an aid to goal attainment, the instructions state, use and stress the use by trimming crews of the following thought process:

1. Look at the conductors;
2. Look at the conductor interference;
3. Trace the conductor interference (the limb) back, on a priority basis, to a natural union with another limb;
4. Remove the conductor interference at the most desirable union;
5. Assure the best possible shape.

"Contractors engaged in firm bidding specific vegetation control jobs cannot afford to be without in-depth information about their operation," said Wagner. "Organizations employing vegetation control services cannot afford to ignore in-depth auditing of time and materials-type contracts. Such organizations should also attempt to describe tree-trimming work, as variable as we know it is, so that firm prices could be received for its satisfactory completion.

"However, since West Penn Power is concerned with community relations and beautification, the quality of work will definitely be evaluated."

Election and Awards

As could be expected, New York provided the biggest state contingent for the record crowd, sending

196. Ohio was second with 99. Other leading states were Michigan, 59; Pennsylvania, 56; Illinois, 33; New Jersey, 32; and California, 26. Canada sent 54, Great Britain, 4; and the Netherlands, 2.

Next year's meeting will be Aug. 8 to 13 in Montreal. Convention cities suggested for 1976 and 1977 included Oklahoma City, Milwaukee, Memphis, Des Moines, Toronto, Philadelphia and St. Louis.

John A. Weidhaas, entomologist from Virginia Polytechnic Institute, Blacksburg, was elected vice-president. J. A. Kimmel, director of parks for Toronto, assumed the presidency. Noel B. Wysong of Golconda, Ill., retired as editor. He is succeeded by Dr. Dan Neely, with the Illinois Natural History Survey, Urbana.

These awards were announced: Award of Merit—President Richard M. Nixon and Edward P. Cliff, Washington, D. C.; Dr. John C. Swartley, Ambler, Pa. Authors Citation — Edward H. Scanlon, Olmsted Falls, Ohio; Dr. Albert E. Dimond, New Haven, Conn.; and Prof. Erik Jorgensen, Toronto, Ontario. Honorary Membership — Leslie Hebert, South Weymouth, Mass. Honorary Life Membership—Frank E. Karpick, Buffalo, N. Y., Orville W. Spicer, Darien, Conn.; Frank Hanbury, Peoria, Ill.; S. W. Parmenter, Kent, Ohio; George Hood, Jr., Palo Alto, Calif.; J. T. Turner, Atlanta, Ga.; and Richard E. Abbott, Canton, Ohio.



K. Dillinger, left, is describing the features of the Baker Equipment Co. aerial lift to Dean Schelle of Avon, N.Y.