

Arborists: Build a Better Image, Unanimous Advice Of Speakers At 40th Shade Tree Conference Convention

450 Delegates at Houston Meeting Seek Expanded Municipal Tree Program, Set To Work on Line Clearance's Future

Since members of the American business community in general put an almost overwhelming emphasis on "public relations" these days, it's no surprise that delegates to the 40th Annual International Shade Tree Conference Convention should do so too.

In fact, a theme reiterated constantly throughout the 6-day affair was the importance of telling the public about the tree business.

But the 450 commercial arborists, municipal foresters, shade tree commissioners, park superintendents, and utility foresters who convened on the Shamrock Hilton Hotel in Houston, Texas, August 16-21, remembered to relate the vagaries of "public relations" to the more tangible values of sound technical know-how and boundless enthusiasm for the job at hand.

After all, the group decided, public relations, in a larger sense, relies on know-how for its substance, and on dedication for its fiber. Thus the varied program of this 40th Convention seemed specifically designed to give a broad base for developing the "better image" so many speakers cried out for.

Underlying themes which characterized the annual meeting (in addition to the public relations function) were (1) the interrelationship of other vegetation maintenance activities to tree work, and (2) the broader

relationship of arboriculture to American industry as a whole.

Defining the first of these themes were talks on tree-lawn maintenance and on general landscaping. Pinpointing the second was a call for extended cooperation between the ISTC and such groups as the Edison Institute to help bring about a general uplifting of arboricultural standards and improvement in the actual appearance of our city streets, where trees and utility lines wage their cold war of co-existence.

But the fact that the recurring concern of delegates and speakers alike was to be the projection of a better image became apparent early in the week when widely known industry figure Keith L. Davey mounted the podium to discuss "Good Standards of Line Clearing."

Davey, president of Davey Tree Surgery Co., Ltd., in San Francisco, Calif., made his remarks during the Tuesday morning sessions on public utility arboriculture. This portion of the program was arranged by C. E. Lee, Southern California Edison Co., Los Angeles; Lee is chairman of the ISTC Public Utility Arborists Committee.

"Line clearing, as a recognized regular part of a utility's planned operations, has only developed since the midtwenties," Davey began.

Previously, he said, linemen removed interfering trees the

quickest and easiest way known, which usually meant a ruined tree. "By the thirties," the pioneer arborist continued, "bad public relations as well as high costs brought contracting by recognized tree companies to the front. As could be expected, with this quick expansion, both good and poor work resulted."

Makeup of "Good" Line Work

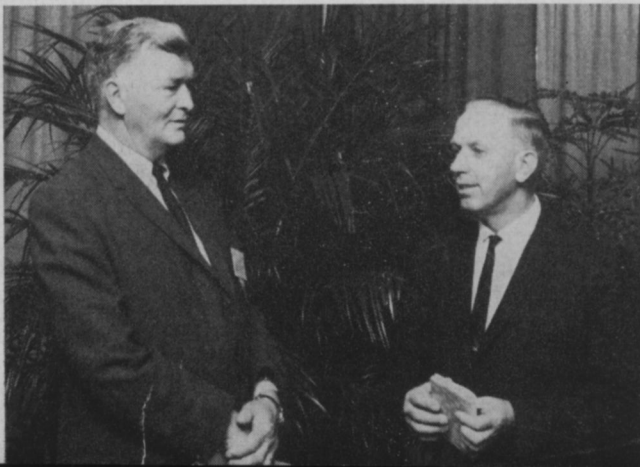
What really makes up good standards of line clearing? Davey asked. "Basically, by its very public nature," he answered, "whatever is done must leave each tree structurally stronger and the neighborhood better looking than before." Then he reminded his audience that there is no shortcut to drop crotching and pruning to a lateral, or in shaping the tree in line clearance.

So 40 years of line clearing, good and bad, has resulted in many inferior specimens of trees still standing on our streets as a result of poor work. Unfortunately, the Californian elaborated, line clearing has also been charged with all the other misplaced trees under or near the lines.

"This is not right or fair," Davey proclaimed, "but it does give us our brightest aspect for a good future utility image. A plan to remove and replace weed trees in utility tree-trimming will bestow real value to the community."

"I believe a carefully planned removal-replacement program using many clonal varieties, such as those developed by the Saratoga Horticultural Foundation, is our best final standard for line clearing. As the need for utility pruning decreases [because of planned planting and underground lines—Ed.] what a wonderful heritage we can leave for our children," Davey concluded.

Davey's address fell on ears already attuned to the public relations aspect of this plea for more responsible management of utility line planting. The previous speaker, a Texas utility executive, left no holds barred in his emphasis on what an image can mean both to utilities and to the companies which contract to



New ISTC president Joseph Dietrich (left) of Greenwich, Conn., was congratulated by longtime ISTC leader and Cleveland municipal arborist John Michalko.



Davey: "A wonderful heritage of trees for our children."

clear their lines and rights-of-way. W. B. Thornton, Right of Way Agent, Houston Lighting and Power Co., said from the outset that he knew no group which is "in greater need of a good public image than are members of the rights-of-way profession."

"You gentlemen whose companies are doing work for the utilities have a public image to protect and improve—not only for the utility company itself, but for your own firms as well."

Thornton said every man and woman working for an investor-owned utility company today, whether directly or indirectly, must assume full responsibility for "selling" the company to all with whom they come in contact. This must be done, he added, "if the investor-owned utility companies are to continue on their own merit and strength, without government domination and control."

"Whether you contract for work with the Detroit Edison, Mountain Valley Electric Co., or my own company, Houston Lighting & Power, you are an integral part of the formation of the public image of those companies, right down to the man burning brush," the *Houstonian* commented.

One way to get a better "PR" performance from employees is to ask utilities to send one of their public relations executives to address line clearance crews and office staff.

"Ten years ago, Houston Lighting & Power Co. had 373,995 customers in its service area. The Trees of Houston Company doing our transmission and distribution line clearing, contacted 12,961 of these customers for permission to trim and remove

trees. In 1963, Houston Lighting & Power Co. had 521,230 customers. Our contractors contacted 24,982 residents or customers. Thus the foreman for Trees of Houston probably came into actual personal contact with more customers of Houston Lighting & Power Co. than all of the employees of the company itself combined." The public relations aspect of this point is obvious, Thornton implied.

In conclusion, Thornton said, "Every man working in our employ should be an ambassador of good will to everyone with whom he comes in contact, whether by idea, by thought, or by action. This is the fundamental way, and the only way, to acquire, keep, and project a good public image."

More ISTC City Tree Say-So?

A proposal that the International Shade Tree Conference extend further its program in municipal arboriculture was an-



Thornton: "Every arborist an ambassador of good will."

nounced by Edgar G. Rex, Executive Secretary, New Jersey Federation of Shade Tree Commissioners, New Brunswick. Rex was also part of the Tuesday morning program.

While many of our large cities have organized street tree plans, Rex began, all too many need help in these plans. Rex, in his relationship of arboriculture to community industry, recommended that municipalities without full-time arborists hire a trained consultant who can direct tree planning activities.

"Impulsiveness in tree plans must be discouraged," Rex added. "We need to assemble a truly integral representation of major utilities to discuss prob-

lems of mutual concern, with the promulgation of street trees as the ultimate goal."

Rex suggested that the ISTC might work in this regard with the Edison Institute, a trade group headquartered in New York whose members are the investor-owned electric utilities.

City's Look/Muny Arborists Team

"If we are to preserve any of the beauty of our cities, the municipal arborist must lead the way." This was the opinion of James T. Oates, longtime city tree authority and now City Arborist for Richmond, Va., who spoke during the sessions on municipal arboriculture. These municipal meetings, which take place concurrently with the National Arborist Association Meeting, are under the direction of John G. Michalko, Shade Tree Commissioner for the City of Cleveland, Ohio, and chairman of ISTC's Municipal Arborist Committee.

"I recently took a 2,000-mile tour through many cities," Oates said. "Many of you here are representatives of utilities, and many of you, as line clearing people, probably belong to the International Shade Tree Conference. If so, and you condoned the work I saw, we then have a tremendous job as municipal arborists—that of selling you on the idea that there is an era of *community* responsibility facing us."

Oakes wants standards of performance set up within the ISTC and within the Municipal Arborists group specifically. He also imposed larger responsibilities on arborists when, while discussing a series of slides, he asked, "Are you prepared to put the proper plants as a whole in a park? Lay out a rose garden? Landscape a median strip?"



Rex: "Impulsiveness in tree plans must be discouraged."

These are all duties which increasingly fall under the responsibility of the municipal arborist, Oakes suggested.

Remaking St. Louis' Tree Dept.

How he brought a poorly organized municipal forestry department to a highly complex and effective level was explained by Edward J. Schrader, Commissioner of Forestry for the City of St. Louis, Mo. Schrader said he was shocked, when he first assumed his municipal duties in St. Louis, to learn that arboricultural standards were not considered in the Forestry Division's operations. There was no in-service training program, and only a few employees were trained at all in municipal forestry techniques.

Trimming schedules were unheard of, equipment obsolete.

With these problems facing him, Schrader set out to remake the entire tree maintenance program for the city.

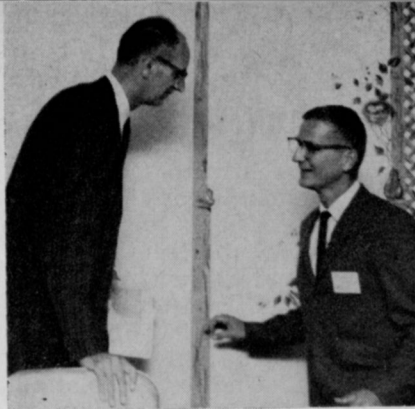
First step, he said, was to obtain the necessary tools for his men. Then he set up a training program, which he implemented by adding a standard operating procedure manual.

"Now," Schrader said, "we were beginning to shape up."

Schrader cut his crews from six or seven men to four men each in order to cover more city area and to increase efficiency. He established work quotas to govern how many trees each crew could remove or trim in a day.

"From this inadequate forestry section in 1954," Schrader said proudly, "We have made considerable progress."

Where before there were 35 men in the section, now there are 62 regular tree workers and 10 additional ones just on weed control (the latter function is considered an allied job and is administered by the Forestry Division in St. Louis). Schrader's operating budget is \$299,000 with an additional \$60,000 for contractual trimming.



Hurried conference before an address on equipment enabled ISTC outgoing prexy Dr. Spencer Davis to match notes with Fred C. Galle, (right) Director of Horticulture, Callaway Gardens, Pine Mountain, Ga.

Schrader says he now has the following equipment: 23 trucks; 2 tractors; 2 Sky Masters; 7 chipper; 3 mistblowers; 3 hydraulic stump cutters; 1 tree mover; 6 weed mowers; 1 hydraulic planting auger; 3 weed sprayers; 28 chain saws; and a well-stocked warehouse of small tools.

Returning to the dominant theme of the convention, Schrader said the city forester must be a good salesman if the forestry division is to become a prominent city department. "You must conduct a good continuous public relations program, educating both the citizens and the city fathers in the value of shade trees and the necessity for their proper care."

As part of his program, the city has had an active campaign to urge citizens to plant trees, and there seems to be an upswing in general interest in tree care in St. Louis, he concluded.

How In-Service Training Works

Schrader had lamented the lack in St. Louis of an in-service training program when he went there to reshape the arboreal face of the city. The following speaker gave a dynamic illustration of how such a program is established.

Outlining a training program for municipal arborists was Frank Vaydik, Superintendent of Parks for Kansas City, Mo., and formerly with Detroit's park and tree agency. He used a bank of three projectors to spread a

30-foot wall of color slides before the audience as he spoke. The presentation was most enthusiastically received.

"The greatest resource any organization has is its people," Vaydik began. Therefore it is obvious that training is of primary importance in efficient operation.

Vaydik feels that too much of today's training material is directed at supervisors, while "underlings" actually need the training most. "Only through training can personnel in the lower echelons develop to their fullest capacity," he summarized.

Vaydik's plan is divided into four phases: (1) *initiation* of program; (2) *selecting type* of program; (3) *obtaining time* to conduct it; and (4) *designing* the actual program itself.

The person to initiate the training schedule, in municipal arboriculture, is the Commissioner of Shade Trees or City Forester, Vaydik said. Then he must remain concerned with the training plan throughout its duration to make sure it doesn't simply wither and die.

The time training sessions are conducted depends, of course, on location, although most shade tree supervisors prefer to schedule their sessions during the winter months, which is generally a "slow" season in many sections of the country because of inclement weather.

"Certain programs relating to specific seasonal work, such as tree spraying, should be held just prior to the start of operations," Vaydik remarked. "It has been proven that training on proper spray methods given in December will produce little results in July."

Vaydik described how City Forester Wilbur Brown, who works in Vaydik's department in Kansas City, carried out a typical training series. After surveying all forestry operations to see what kinds of work are actually done and what is needed to implement skills in doing these things, Brown confers with his foremen. In one case, it was decided that a training session in spraying techniques and operation of the mistblower was needed.

Brown selected March for the mistblower training period, since his men would then be ready for early spring spray operations.

First, the men were given a



Training program for arborist crews was explained by Frank Vaydik (left) who illustrated a point for Professor E. W. Zuckauskas of Texas Tech in Lubbock.

lecture explaining the purpose of the current campaign, which was control of Dutch elm disease. Then a film called, "Recognition and Control of Dutch Elm Disease," supplied by an oil company, was shown.

Next, a film on the nomenclature, assembly and disassembly, and maintenance of the mistblower pump was shown and discussed thoroughly. As a final measure, the mistblower itself was demonstrated by a representative of the supplier, after which each man was given an opportunity to operate the machine.

When it comes time to train employees in general arboriculture, techniques must be altered to suit the subject being taught. "Pruning and repair of trees and shrubs, for example, are best taught by demonstration; so the class is taken into the parks for this facet of its indoctrination," Vaydik revealed.

"Our men are also required to work on lawn areas certain times of the year so we give them some basic instructions in turf management. We also require that they be familiar with more common insects and diseases of trees, shrubs, and evergreens, as well as control methods," the Kansas City park supervisor continued.

In conclusion, Vaydik repeated his colleagues' plea for training in public relations. "The worker in the organization usually has more contact with the general public than the supervisor," he said. "Therefore, the men must be taught the proper way to deal with the public. This is extremely important to those of us engaged in government operations because our funds depend to a degree on our image. Well-trained men give us that image."

Suit Tree to Site

Since the selection and planting of trees is becoming as important to arborists in general as the control or maintenance of trees, delegates welcomed an address on the opening day of the 40th Convention on how to plant the right tree. A. F. DeWerth, from the Floriculture Section, Department of Soil and Crop Sciences, Texas A&M University, was on hand with a timely discussion of this subject.

DeWerth feels trees are the most crucial factor in the planning and management of landscapes, and that tree selection is therefore of extreme importance.

Trees vary in size; form (whether erect, spreading, open headed, etc.); and texture (whether dense or coarse textured, filamentous, etc.). They also vary in ornamental characteristics. With the variety of trees available, what are some of the practical considerations in tree selection? DeWerth outlined them as follows:

(1) *Rate of growth*: sometimes, when there are no trees, a rapid-growing tree, for example, may be needed;

(2) *Light requirements*: whether tree is to grow in sunny or shady conditions; pertains mostly to small trees;

(3) *Exposure*: prevailing winds should be studied; where strong winds are prevalent, trees with brittle or soft wood or very shallow root systems should be avoided;

(4) *Utilities*: check presence of underground pipes or drains to see if vigorously growing root systems will be objectionable;

(5) *Maintenance*: what diseases, insects, etc. is the tree subject to; will its foliage cause so much litter that it will require a cleanup crew periodically, etc.;

(6) *Location*: watch for lawn areas where dense shade will harm turf; or where a tree may grow into structures; and

(7) *Enrichment*: this is the most variable requirement, and deals with relationship of tree to its surroundings on an esthetic basis; what color foliage, blooms, etc.; when will the tree flower, etc.

Dr. DeWerth concluded with an extensive discussion of the points above and supplied delegates with charts outlining trees suitable for the Texas area in which he conducts his research.

In educational sessions during the first day, delegates had a chance to hear latest technical

developments in maintenance of tree lawns, and what is new in tree insect control. Chairman of this section was Joseph A. Dietrich, Park Superintendent from Greenwich, Conn., who was later named president of the ISTC for the coming year.

Problems of keeping tree-lawns well maintained are of intense concern to many arborists. Discussion of this topic was offered by Dr. Ray A. Keen, from the Department of Horticulture, Kansas State University, Manhattan. Dr. Keen outlined several useful rules for his audience, pointing out that while some people manage to produce good turf beneath trees, it is still a difficult task in most cases.

General practices of good turf management should be observed, including mechanical renovation when soil is compacted but a stand of turf has already been established.

Chickweed and nimblewill are among the "shade-loving" weeds, and sometimes turf diseases also are more prominent in shaded areas.

As one interesting alternative to turf beneath trees, Dr. Keen suggested groundcovers, but reminded his audience that these are not useful where there is a lot of traffic.

One delegate asked if it would be possible to thin trees by pruning, thereby permitting more sunlight to infiltrate to the area below. Dr. Keen said this might have value if it were done prudently, and by a professional.

Galls, Beetles, Nematodes

Following Dr. Keen's address, a trio of tree pest experts examined a triumvirate of afflictions which included hackberry gall, southern pine beetles, and nematodes.

First of the three, Clyde R.

City arborists have lots to smile about, remembering how they have improved the lots of our cities' trees. St. Louis tree supervisor Edward Schrader (left) recalled how he found things in his city several years ago while Richmond's smiling arborist Jim Oates beamed his sympathy.





Enjoying the chance to try new pieces of equipment, arborists wandered from display to display during the ISTC's mammoth equipment show.

Butler, a tree-ailment diagnostician from Dallas, explained the biology and control of hackberry gall insects.

The hackberry is a common tree in Texas, Butler said, and trees affected by the hackberry gall must constantly put out new leaves to stay alive. These afflicted trees grow consistently weaker because of a lack of food, and thence become more susceptible to other pests such as the webworm.

For control, Butler recommends an early spring spraying with a mixture of 1 pt. 55% malathion and 1 pt. 20% lindane (gamma isomer of benzene hexachloride) in 100 gals. of water. Be sure to spray before gall starts to swell, he cautioned.

Analysis of southern pine beetles came from Dr. David E. Ketcham, Forest Service, U.S. Department of Agriculture, Alexandria, La.

"Although pine bark beetles are probably our most destructive group of forest insects," Dr. Ketcham said, "they can also cause terrific losses to pines used as shade trees or ornamentals."

The *Ips* engraver beetle and the black turpentine beetle (*Dendroctonus terebrans*) are the most common bark beetles attacking ornamental pines.

Since the *Ips* engraver beetle and the southern pine beetle introduce blue-staining fungi (*Ceratocystis* spp.), trees cannot be saved once they have become infested.

However, Dr. Ketcham said, the black turpentine beetle does not carry these fungi. Therefore, trees recently infested with this insect can be saved by spraying infested portions with a 1%

emulsion of gamma benzene hexachloride in water.

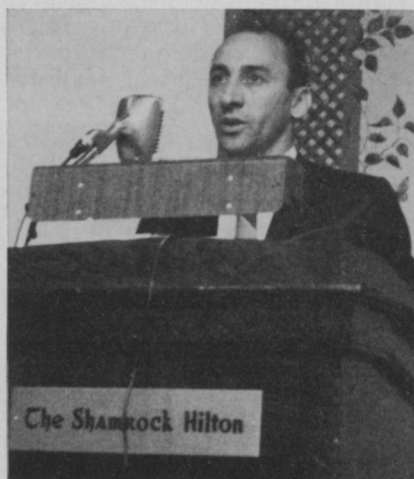
Nematodes, Far Out Pests

Final discussion of Monday's program concerned nematodes and their effect on trees. These bizarre and exotic organisms are only recently beginning to be understood, and the discussion by Dr. John L. Ruehle was of note.

Ruehle, who is with USDA's Southern Forest Experiment Station in Athens, Ga., pointed out that nematodes are in fact "roundworms," and that their chief symptoms are really those of general debility, since damage wrought by the soil-borne pests is felt in the entire functioning process of the tree as it gathers nourishment from the soil.

Nematodes affect tree seedlings, and the best control that can be achieved lies largely in soil treatments of various types before planting, treatments such as soil fumigation.

In mature plants, unfortunately, the role of nematodes is



Yelenosky: "No simple answers to soil aeration problems."

even less fully understood. Continuing research, Dr. Ruehle said, is aimed at the ultimate solution of the nematode problem in all crops, including turf and trees.

ISTC's Soil Aeration Search

During talks on Thursday before the final banquet and convention windup, three highly technical discussions of tree ailments kept the attention of the gathering despite the fact that it was the fourth consecutive day of talks, demonstrations, and panels.

Highlighting the three was a presentation, by Dr. George Yelenosky, Department of Botany, Duke University, Durham, N.C., of results of ISTC research at Duke into tolerance of trees to deficiencies of soil aeration.

This research is of a continuing nature, and Dr. Yelenosky's current report was an elaboration and updating of the 1963 results which he presented to the convention in Toronto last year. (W&T, Sept. '63, W-18.)

"Research for the past three years at Duke University under the sponsorship of the International Shade Tree Conference indicates that various species of trees differ in their tolerance to poor soil aeration," Yelenosky said. Seedlings of seven species of trees were used and aeration tests included flooding experiments; experiments where root systems of growing seedlings in soil in pots were sealed off from atmospheric air and also, where the soil was saturated with various gases; and respiration experiments of excised root tips from seedlings growing in sand.

American elm seedlings, Dr. Yelenosky reported, were found to be the most tolerant to poor soil aeration and tulip tree seedlings the least tolerant.

Intermediate between the two cited above stand such trees as little-leaf linden, "Moraine" honey locust, white oak, sugar maple, and flowering dogwood.

There are as yet no simple and straightforward answers to the problems of tree growth and soil aeration. Dr. Yelenosky suggests, on the basis of information obtained in his current study, that "preventive action" be one of the cardinal rules: be conscious of poor soil aeration; avoid excessive moisture in soils for prolonged periods of time; be cautious when applying fills around

trees; evaluate the effects of soil compaction, road construction, and other barriers to gas diffusion near roots of trees; do not ignore gas leaks near roots of trees; and finally, start corrective action as soon as poor soil aeration is definitely recognized.

Decay in Living Trees Studied

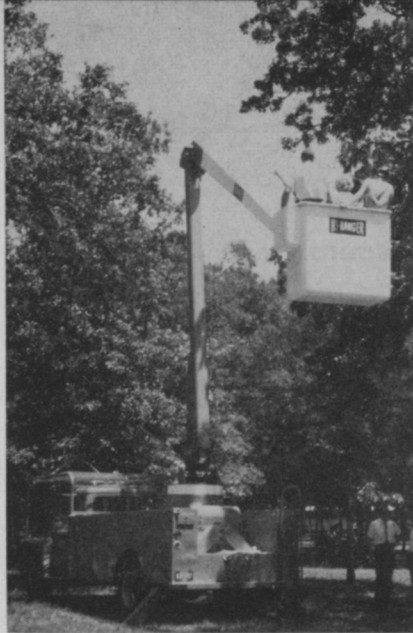
Another on Thursday's technical lineup was Dr. Ray R. Hirt who discussed evidences of decay in trees. Dr. Hirt is Professor Emeritus, State University College of Forestry, Syracuse (New York) University.

"During my professional life," Dr. Hirt said, "I have served quite a number of times in court as an expert witness on cases involving serious injuries and sometimes death, caused by falling trees and branches, almost all of which were associated with wood decay. Such cases invariably rest on the fact that evidences of weakness were plainly visible and recognizable prior to the accidents. These experiences have impressed me with the importance of recognizing decay in trees located where structural weakness is a threat to life and property." Dr. Hirt is convinced that many accidents could have been avoided by early recognition of the decay factor, and believes this detection should be an accomplishment of every well-trained, experienced arborist.

One of the best evidences of decay in trees is the presence of fruit bodies or conks of wood decay fungi. The conks of the more serious wood destroyers usually are not produced until decay is well advanced, at least in a localized area. "Thus the presence of certain fungus fruit bodies," Dr. Hirt emphasized, "means that decay is already developed."

Another clue to decay in living trees is distortions of trunks. "Tree trunks of healthy trees are relatively uniform in shape and taper, thus unusual distortions in taper and in circumference should be viewed suspiciously," Dr. Hirt warned. Pronounced, localized trunk irregularities are sometimes designated as cankers, the expert added, and fruiting structures of wood-rot fungi may occur on the face of the cankers. "Such a combination, of course," he said, "indicates internal decay."

Another symptom which may herald decay are acute-angle crotches. Dr. Hirt said many of



Aerial lifts, a crucial piece of equipment for the arborist, also can be fun for delegates' children.

our select ornamental trees produce branches and secondary trunks at very acute angles with the main trunk. Probably most elms and sugar maples are prone to do this, he interjected. As the trunk and acute-angle branches increase in diameter, the adjacent sides establish severe pressures, sometimes sufficient to kill the bark at the areas of pressure and expose the sapwood.

Since these crotches are places of mechanical weakness, they eventually may crack. Debris accumulates in the cracks, keeps the exposed sapwood moist, and hence provides an excellent location for the development of wood decay fungi.

Other inducements to decay development cited by Hirt included wounds which may also offer inroads to windborne spores of wood-decay fungi. Even though wounds are painted, when they're fresh, with a protective tree paint, when wood beneath the paint dries, minute cracks eventually appear.

Another technical presentation late in the convention's final hours was a penetrating analysis of littleleaf disease in pines by Dr. John S. Boyce, Jr., of the

Department of Plant Pathology, University of Georgia, Athens.

Dr. Boyce thinks the littleleaf story is a fascinating one. He defined the disease as an ailment which afflicts shortleaf and, to a lesser degree, loblolly pines from Virginia into Mississippi. While of major interest to forest growers, it also attacks pines grown for shade tree use.

In early stages there is a slight yellowing of the foliage, shortening of current needles, and reduction in shoot growth. The tree crown appears off-color in sunlight. "As the disease progresses," Dr. Boyce said, "the crown becomes sparse and ragged, the needles are very short and yellow, and the foliage is in tufts."

Trees less than 20 years old rarely have littleleaf, and it usually develops in stands 30 to 50 years old.

Reason for the development of littleleaf disease is apparently a complicated relationship between a cinnamon fungus present in the soil, and poor soil conditions. Neither alone produce littleleaf, but the two together can and do.

"What can be done about this disease of complex cause?" Dr. Boyce asked. "The arborist is fortunate because he can resort to a treatment that is too expensive to use under forest conditions. He can fertilize."

One phase of research has shown that heavy nitrogen fertilization in the early, typical stages of littleleaf results in the disappearance of symptoms for several years afterward. This has resulted in the recommendation that, to treat or prevent littleleaf, a commercial 5-10-5 fertilizer at the rate of 1 ton per acre, plus one-half ton of ammonium sulfate or sodium nitrate, should be broadcast in the spring over a 50-foot-wide area about each tree.

Next year's ISTC convention, expected to be one of the biggest ever, will meet in Washington, D.C. (Dates to be announced.)

Delegates remained attentive right up to the final session, when this group shot was made.

