## Meeting Dates



National Pollution Control Exposition and Conference Houston Chamber of Commerce, Astrohall, Houston, Tex., April 3-5.

Florida Turfgrass Trade Show, Florida Turfgrass Foundation, Jack Tar Harrison and Belleview - Biltmore Hotels, Clearwater, Fla., April 24-26.

Keystone State Association of Cemeteries, Spring Convention, Shawnee on the Delaware, June 9-12.

Turfgrass Sprinkler Irrigation Conference, University of California Extension Conference Center, Lake Arrowhead, Calif., June 21-23.

Tri-County Chapter, California Landscape Contractors' Association, 17th Annual Convention, Ojai Valley Inn and Country Club, Ojai, Calif., June 25-29.

Lawn and Utility Turf Growers Field Day, Rutgers University, College of Agriculture and Environmental Science Campus, New Brunswick, N. J., July 30.

Golf and Fine Turf Growers Field Day, Rutgers University, College of Agriculture and Environmental Science Campus, New Brunswick, N. J., July 31.

Midwestern Nurserymen's Summer Meeting, Zelenka Evergreen Nursery, Grand Haven, Mich., August 13-14.

1968 Turfgrass Field Day, Pennsylvania State University, Joseph Valentine Turfgrass Research Center, Campus, noon August 21-noon August 22.

Lawn and Ornamentals Days, Ohio Agricultural Research and Development Center, Wooster, Ohio, September 10-11.

1968 Southern California Equipment and Materials Educational Exposition. City Park, Lynwood, Calif., October 16-17.

American Society of Agronomy, 1968 Annual National Meeting, Jung and Roosevelt Hotels, New Orleans, La., Nov. 10-15.

Weed Science Society of America, Annual Meeting, Las Vegas, Nev., February 10-13.

## Only By Chance Do Bark Beetles Locate Elms

Scientists have found insectfeeding stimulants and deterrents in the bark of some trees. Most important is the chemical in the American elm which stimulates bark feeding by the European elm bark beetle, transmitter of Dutch elm disease fungus.

The scientists also discovered that the beetles are not actually attracted to healthy American elms as was previously believed. Instead, beetles feed on the elms only when finding them at random in their flight. If the beetles land on non-host trees, they are deterred from eating by a chemical in the bark. They continue on until they find an American elm.

Both discoveries, according to the researchers, will have great significance in control of Dutch elm disease. They also provide information about the probable nature of chemical communications between many other insects and their perennial host plants.

University of Wisconsin scientists, Dale M. Norris, James E. B. Baker, B. M. Trost and Barry L. Gilbert, have isolated the chemical stimulant, pentacyclic triterpene, from the bark of American elms. A deterrent chemical, juglone, has also been isolated. Juglone keeps the elm bark beetle from feeding on the bark of shagbark hickory, a non-host tree. It does not, however, stop the hickory bark beetle from feeding on the shagbark hickory.

Chemical deterrents to elm bark beetle feeding have also been found in white oak. The researchers expect there are deterrent chemicals in most, if not all, non-host trees.

Norris says his group will attempt to protect important trees from insect attack by altering the taste of the trees and thus confusing the insects.

## ——Trimmings ——

Forest of Fifty. Each state is represented by its official or otherwise favorite native tree in a unique planting near Portland, Ore. The Oregon Association of Nurserymen has established a 50-tree forest of state trees just south of Portland at a rest area on the Baldock Freeway. The site is near the Hubbard Interchange. Trees are small as yet, since the young forest was established just more than a year ago. The first grove of 13 trees represents the original 13 colonies. Then come state trees by sections of the country. This is a tribute to the national beautification program and an honor to each state, thanks to Oregon's progressive nurserymen.

Green Seed Marks the Trail. Embankments on the interstate highway through Salt Lake City, Utah have been planted with dyed grass seed sprayed on with a hydroseeder. Green dyed seed serves as a marker for workmen who can easily spot the areas covered.

Trial By Students. Colorado State University is establishing a research green for student use. A 10,000 square foot area near the Student Union will be used in the hope that heavy student traffic will simulate golf course conditions. Idea is to research methods for establishing superior greens. Agronomist R. E. Danielson is also seeking US Golf Association support for funds to research soil matrix needs for turf maintenance under heavy recreational use.

We goofed. Our apologies to Hercules, Inc. and Evan Swartz. We ran an interesting article in the March WTT on the use of invert sprays for improved spray drift control. Author Swartz, director of the Noxious Weed Department at Shawnee County, Kan., related his experiences with Visko-Rhap used for roadside spraying. We tagged the article with a headline which said "thickeners" when we should have said "Use Invert Sprays."

Good News for the Industry. The University of Delaware Research Foundation has just released a report stating that herbicides used in farm and industry are not contaminating ground water. E. M. Rahn, horticulturist at UD, reports also that herbicide residues appear in small amounts in surface runoff water only under unusual condition. Highly sensitive detection methods to analyze ground and surface water were used on periodic samples from fields treated with atrazine and trifluralin, and from an industrial area treated with enough bromacil to control vegetation for a period of years. No trace of herbicides was found in ground water seeping into nearby drainage ditches or streams. Surface runoff showed only 10 parts per billion, which is about 100 times less than the amount considered harmful to plant or animal life.