



Gypsy Moth Threat To The Midwest

TO THE TYPICAL homeowner in the Midwest, the gypsy moth is a strange and distant phenomenon, one that does not threaten the beauty of his own backyard.

The moth has begun to rate editorial space many miles from the devastated Northeast, however. The Oct. 6, 1973 *Chicago Tribune* presented an article titled "Gypsy moth a threat to nature in Illinois."

The story said that the first gypsy moth in Illinois was trapped this past summer in Palos Township in

south Cook County by a ranger of the Cook County Forest Preserve District.

Stanley Rachesky, entomologist at the University of Illinois speculated that the gypsy moth (in egg stage) may have hitched a ride to the heartlands on a variety of vehicles.

A new pest for the future? "It may or may never become a problem in Illinois," Rachesky said. "It's just too early to tell."

In Michigan, the threat of gypsy moth infestation has officials wor-

ried even though damage was "slight" last year. But the threat was sufficient for Michigan State University's department of entomology to name gypsy moth the "Insect Pest of the Year." In 1973, some 13,000 acres in central Michigan — where the pest is most prominent — were sprayed. If the infestation spreads this year, results could be disastrous, officials warn.

Progressive Midwestern arborists and custom spray applicators will probably be turning more and more to biological control or larval pests like their counterparts in the Northeast.

The gypsy moth and other larval pests defoliated an estimated 1.7 million acres of northeastern woodland last year (up 30 percent from 1972), says the USDA, but arborists and municipal officials there were successful in combating the pests with *Bacillus thuringiensis* (Bt), trade-named Dipel.

"It worked quite well for us this year against the gypsy moth and other caterpillar pests," said George W. Gauer, director of purchasing for Lawn Doctor Inc., Wickatunk, N. J., the parent company of some 95 lawn servicing and tree spraying operations nationally. Lawn Doctor has 20 dealers in the northeast.

The northeastern dealers sprayed some 600,000 sq. ft. of ornamental trees and shrubs for gypsy moth. Dealer feedback was very favorable, Gauer said.

"Gypsy moth infestation ranged from a nuisance in some areas to a devastation in others," he reports. "Ocean County, New Jersey, a heavily forested new housing area, was among the latter. We were still able to bring the moth under control in Ocean County after two or three applications.

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What Is BT?

Bt is a natural bacterium, *Bacillus thuringiensis*. An improved Bt strain, trade named DIPEL is available as a wettable powder.

When gypsy moth or other caterpillars ingest foliage sprayed with Dipel, their digestive mechanism is disrupted and the pest immediately stops feeding. Death follows from within three hours to three days.

Unlike the organic chemical insecticides, this compound controls only Lepidopterous larvae — the group which includes worms such as: gypsy moths, tent caterpillars, and

inchworm. It is not harmful to desirable insects, animals, fish, humans, or plants.

Larvae which have died are not dangerous, either. Tests have shown that birds and other predators readily eat and thrive on sprayed larvae.

Dipel can be applied by any means normally used to apply conventional insecticides. During the past three years, it has been applied by hydraulic and mist sprayers, garden-type tank sprayers, helicopters, fixed-wing aircraft and garden hose spraying attachments. Using correct

techniques, all were equally effective. Thorough coverage is important as larvae must ingest the material to be effective

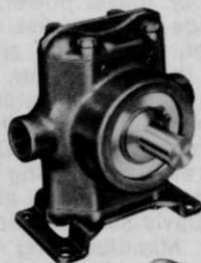
Cost is somewhat higher than other environmental protection chemicals. But safety and negligible environmental impact, however, make the small difference in cost seem insignificant.

Dipel is manufactured by Abbott Laboratories, North Chicago, Illinois. For more details, circle (723) on the reply card.

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GYPSEY MOTH

(from page 16)

"We plan to keep using it, especially where the moth is more than just a nuisance," Gauer said. "We use it for several reasons. It works. It's biodegradable. And it's very well accepted by our customers . . . they ask for it by name."

Pete Woodcock, City Forester for Scarsdale, N.Y., used the product this past season to protect some 70 miles of roadside trees and 125 acres of parkland. Woodcock termed the results "excellent."

Woodcock's men applied the bacillus compound with a mist-blower at the rate of five to seven pounds per 100 gal. of water. The Scarsdale oaks, maples, sycamore, birch rhododendrons and shrubbery received a one-shot treatment.

CITIZENRY INFORMED

The local citizenry was informed of the decision to switch to a biological insecticide via the Scarsdale *Inquirer*, *Village Report* (a quarterly report that goes to each Scarsdale household) and Village Board meetings.

The response?

"The local Audubon Society chapter, and other concerned groups were ecstatic that the Village had taken the initiative to go to a biological insecticide," Woodcock said.

"The cost is high," he said, "but not excessive when you consider the results. I prefer the wettable powder because there are no mixing or storage problems. Best of all, it's effective."

Byron Lynch, an aerial applicator

on Long Island, has sprayed some 2000 acres for gypsy moth over the past two seasons.

"It's a fantastic product," Lynch said. "It works all the time." He believes that the key to success in treating for gypsy moth is timing.

"All my customers were very satisfied," he said. "It provides the kind of excellent control that traditional organic phosphates no longer provide due to resistance buildup.

"Then too, there are the outstanding ecological advantages," Lynch said. "We don't have to worry about killing non-target insects, birds, etc. But the main reason I use it is that it works."

Bryon Blundell built his spraying business, Evergreen Enterprises in Wilton, Conn., by using ecological products. Treating for gypsy moth is a matter of ethics with this native-born Britisher.

Last year he sprayed about 500 private properties using two 35 gal./min. Hardie sprayers. His typical job is one-half acre.

Any disadvantages?

"One has to take a bit of care on rainy days," Blundell said. "Since Dipel is not a contact kill insecticide, a heavy rain can slow down its action. I don't spray if rains threaten and my schedule is not too oppressive, or I use a contact pyrethrum compound."

"I can foresee the day when biologicals will be just as high volume an industry as traditional chemicals are now," said Art Hohmann, Conservation Control Tree Specialists, Huntington, L. I., N. Y. "We're looking to the future with Dipel. We expect it to be our major spring chemical."



Larvae eat everything in sight, especially young oak leaves. Frequently, however, the larvae do not eat the entire leaf, devouring only enough to do irreparable damage.



Byron Lynch, an aerial applicator on Long Island, has sprayed 2000 acres for Gypsy Moth during the past two seasons.

"We enjoyed very good control last season," Hohmann said. "Of our 50 or so customers only two complained. That was because it rained within 12 hours after application."

He sprayed approximately 100 acres of privately-owned oak, maple and ash. For cankerworm, he applied Dipel at $\frac{3}{4}$ lb./100 gal. of water; for gypsy moth, 1 lb./100 gal. of water. It also mixes well with fungicides, and liquid foliar nutrients.

"The safety . . . that's what we sell," he says. "Someday we'll have an all biological program." Many of his customers ask for this biological product by name. Part of the reason is that Hohmann promotes the ecological aspects of this material to local garden clubs. The Long Island arborist also makes a point of telling customers and potential customers that although this insecticide will take a bit longer to kill the caterpillar, feeding damage ceases within hours. "And that's the main thing," he says.

Dipel was also effective last season in the Midwest against an old pest, the inchworm (or cankerworm).

"I could see the eggs all over my trees," said Robert F. Kroschel, Bensenville, Ill. "They were really loaded."

Kroschel sprayed his 25 ft. fruit trees three times in six weeks starting in mid-May. "I like it because it mixes well and doesn't harm birds or the ecology," he said, "and also because it's effective."

He also takes pride in his pair of 100-year-old Downy Hawthorne trees. The species has a height of just about 10 ft., with a mushroom canopy that spreads over 30 ft. He treated these for inchworm. Results
(continued on page 34)



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Pete Woodcock, city Forester for the Village of Scarsdale, N.Y. applies fungicide for Dutch Elm Disease. Earlier he treated 70 miles of roadside foliage and 125

GYPSY MOTH

(from page 29)

were excellent. Kroschel's 30 ft. white ash and 50 ft. silver maple were also plagued with inchworm until he used Dipel.

"Excellent results," he summed up. "I made certain to saturate the under and upper sides of the leaves, using from 200 to 300 lbs. pressure

with a power sprayer.

Fred Jorgensen of Palatine, Ill., is another Chicago-area homeowner who is pleased. "I don't like to use poisons," he said. "I'm always the first to try any ecological product."

He applied Dipel at the recommended rate to the four maple trees in his yard to halt the spread of inchworm. "It really does the trick," he said. □

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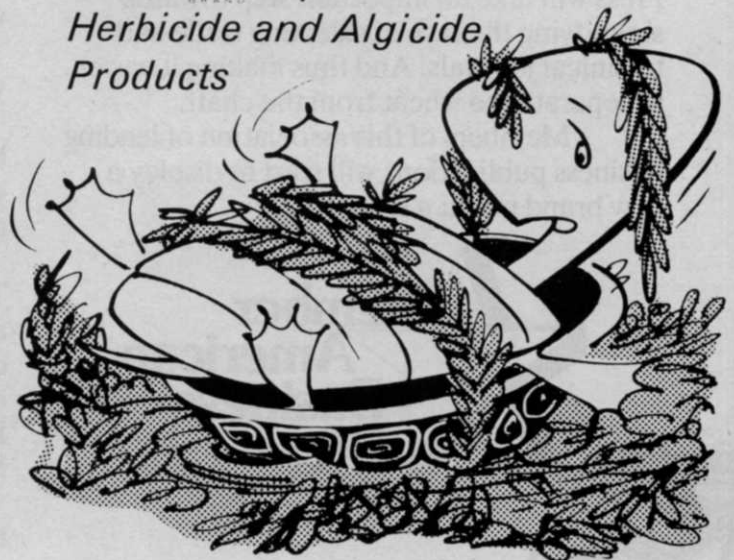
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