

WILL THE INSECTS TAKE OVER?

By Fred V. Grau

INCREASED pressure to curtail the uses of certain insecticides will continue to be exerted by both governmental agencies and the public. However, denial of a favorite insecticide does not mean that, overnight, insects will destroy turfgrass areas. Effective control programs have reduced populations to a point where minor depredations can be tolerated. What then lies ahead? Will there be safe biodegradable agents that will keep insect populations at tolerable levels?

One problem with chemical insecticides is that with time, insects develop resistance. Another serious disadvantage is the unavoidable destruction of beneficial insects which associate with the "bad guys."

Turfgrasses that are resistant to insect attack have not yet been announced. In fact, there is virtually no work in this direction. In 1942, the first variety of wheat resistant to the Hessian fly was introduced. In time this one variety loses its resistance. Then another resistant variety (out of 22) is planted and the problem is postponed for another 10 years.

Other crop varieties, resistant to a number of insects, have been developed. They include alfalfa (weevil, aphid, leafhopper), barley (greenbug), corn (borer, earworm, rootworm) and wheat (cereal leaf beetle). This should give hope to researchers in turfgrass even though 10 to 15 years may be needed to breed resistance into a crop.

Natural enemies offer hope in long-lived crops such as turfgrass where the predator population builds up without interruption. One excellent example of this approach is the Milky Spore Disease of Japanese beetle grubs. It seems strange that a similar approach has not been made for other pests. So far over 700 insect enemies have been introduced, but less than 170 have become established. Problems of increasing enemy populations and effectively dispersing them continue to plague the industry.

The ladybug (*Rodolia Cardinalis*) has been reared and released successfully to control the cottony-cushion scale of citrus plants. Another promising effort is the mass rearing of the lacewing larvae for controlling the cotton bollworm.

It is as yet unknown that the parasite of the vector Dutch elm disease is becoming established, which hopefully will eliminate the widespread destruction of elms.

Several parasites of the spotted alfalfa aphid are controlling this pest. This, along with resistant varieties, offers great hope.

Bacterial toxins appear promising for large scale applications to crops. *Bacillus thuringiensis* was identified as an insect pathogen in 1927. Since 1950 when the toxin was isolated, 11 types from all over the world have been isolated. Several pharmaceutical companies are working to

develop their own pathogenic strains. This toxin would act as a broad spectrum insecticide. Insects would be unable to develop resistance as easily as they do to conventional insecticides.

Insect viruses seem to be more promising than insect bacteria. Of some 250 viruses that are pathogenic to insects, about 10 are "nearly ready" for use. So far these viruses have shown no response in over 2,000 tests on animals. One trouble lies in mass producing the virus. Another is that of dispersing it in such a way that ultraviolet radiation will not kill it before it has a chance to kill the insect.

There are chemicals that fall into the category of "attractants." One chemical will act as a food attractant. Methylbutanol attracts and kills male fruit flies. The first sex attractant (called a pheromone) was isolated from the female gypsy moth in 1960. More than 200 others have been discovered since then. Commercially available materials include attractants for 1) male pink bollworm, 2) cabbage looper and 3) fall army worm. Originally extracted from the females, they are now made synthetically. Concentration and timing of a spray can make or break the program. Too heavy a dose can repel the insect.

The juvenile hormone (ecdysone), which must be ingested, is very difficult to synthesize and, though extremely interesting, does not seem to offer too much hope for the future. Even so, one company has invested about \$10 million over five years trying to produce a marketable hormone-like compound for insect control.

The technique of attracting male insects, then sterilizing them and releasing them to mate with females which then lay infertile eggs, has been highly successful in reducing the screw-worm fly in Florida and the Southwest. Each week 125 million sterile males are released along a 300-mile buffer zone along the United States-Mexican border. This sterile male technique is being broadened to include several economic crop pests. Costs of developing pest control vary but generally are far less than the economic damage suffered. The cost of the screw-worm program is reported to be one-fifteenth of the estimated annual damage to livestock and control costs before elimination.

Considering the broad range of techniques that have been successful on certain insects, control of turfgrass insects by similar methods is foreseeable. If the female cutworm moth and the female sod webworm moth laid only unfertilized eggs there would be no larvae to eat the grass roots. I am not enough of an entomologist to carry the analogy through, but hopefully there will be methods developed which will permit the growth of insect-free turf without the need for poisons that degrade the environment.

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Patty Berg to Speak at Medinah Clinic

The education committee has announced that Patty Berg will speak at 11:00 on November 16. Her topic will be "The Importance of Golf Superintendents and Professionals at Golf Courses."

Mike Bavier sends us this bit of wisdom:

"Oldie but Goodie"

The only time a man grows is when he is green. The moment he thinks he is ripe, he starts to get rotten.

The Supt. - Mgr. meeting was a great success. Winners in the Supt. - Green Chairman tourney were Paul Voykin and his chairman Joseph Fink.

The following is reprinted from the Northeastern GCSA newsletter, OUR COLLABORATOR. The author is Robert L. Mitchell, editor.

The Most Important Man

I was once asked by a friend of mine, that happened to be a Golf Pro, "who is the most important man at a golf club"? My answer to the question was short and simple. It was "THE DISHWASHER".

Sounds like rather silly an answer. But was it? At that time I was General Manager of my Club, with the responsibility of supervising all departments of the Club. My House Steward was having real difficulty obtaining and keeping dishwashers.

If you don't think the dishwasher was the most important man at the moment, imagine your self with the responsibility of feeding approximately 400 persons that night and again the next noon, and no dishwasher.

Actually to be strictly right the answer should have been, "the person you don't have on the job". Just think about it. Imagine fairways to mow and no tractor driver; greens to mow and no greensman; bills to be sent out, if you want money to continue operations, and no book-keeper; members wanting service from the Pro Shop and no one there; members wanting meals and no cook, or waitress. I could go on ad infinitum.

The point is that any person suddenly becomes important if he is not there to perform his job and give service to the membership.

Probably we all like to think that we are the most important man at the Club. We all are important. Who is to say the **most** important? Without a golf course superintendent the golf course suffers; without a golf pro the Pro Shop suffers; without the House Manager the locker room, dining room and bar operation suffers. All of these to the detriment of the service offered the members. And remember providing this service to the membership is the only reason that any of the Club's employees are there.

One thing is sure. If the department heads are properly carrying out their job, they will train and organize their staff so that the operation will carry on successfully, at least for a limited time, without them, in case they are sick, on vacation or absent for any other reason.

To answer the original question briefly, and frankly it was rather a silly question; there is NO most important person at a Club. All personnel are important to the successful operation of a Club. Any person suddenly becomes very important if he is not there to carry out his job.

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BIG GEORGE By Virgil Partch



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CARTOON CONTEST CORNER

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ARE WE POLICE?

A number of editorials have recently appeared in Chapter newsletters regarding the role of superintendents in suppressing vandalism on the golf course. We are reprinting from the Mid-Atlantic Newsletter —

Alright! What the hell do you kids think you're doing here?? Get off this golf course before I run you off!!!

Sounds familiar, doesn't it? How many times last summer did you run some trespassers off just like that? Bet you even used the same words too, didn't ya'? Well, consider this while you're reading this by the fireplace this evening; A superintendent named Herman Miller from Champaign, Illinois tried the same technique at shooing some vandals off his course. Result — they turned on him and ironically enough, beat him to death with golf clubs!

There was another case in Long Island where a super wound up in the hospital from exactly the same thing.

Case in point — we are not police. We are hired to maintain the golf course. Maintenance does not encompass any phase of police work unless you have an unusual contract.

It seems that the majority of the supers, in accepting more salary each year, are expected to take on more responsibility to prove their merit. This is good to a point, but let's not forget one small thing. We are paid for our professional knowledge. We are trained in turf management, not police work. NO golfgreen, green, clubhouse, or piece of equipment is worth jeopardizing your health, safety, or your life for. Police officers are not expected to know and do our job, so doesn't it seem logical that we shouldn't try to do theirs?

However, for those of us who call the police and see the vandals apprehended, then immediately released because of fear, apathy, or whatever, on the part of the club officials, we are faced with a serious problem. This is the case at several area courses, one of which is all too familiar. If this is your particular situation, then welcome and good luck. Security is always a problem where there is a vast expanse of open space with no fence around it for protection. Let's hope club officials become aware of the problems that come with a laxness in punishing the people who damage their investments on the course.

Know the phone number of the closest police station and USE it! Don't, Don't jeopardize yourself and try to be a J. Edgar Hoover. It's not worth the effort!

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WHAT DOES AN EXECUTIVE DO?

Some anonymous and tormented business executive once asked himself the above question and then sat down to write the following definition:

A business executive really has nothing to do, except . . .

1) Decide what has to be done; explain to someone why it has to be done; tell someone to do it; listen to reasons why it cannot be done, why it should be done by someone else, or at some other time.

2) Follow up and see if the thing has been done; discover that it has not been done; listen to excuses from the people who should have done it; and think up logical arguments to overcome the excuses.

3) Follow up a second time and discover that it has been done, but done incorrectly.

4) Reflect that it has taken two weeks to get something done wrong when in twenty minutes he could have done it right by himself. And to realize that such an idea would be demoralizing to his subordinates because it strikes at the very heart of their belief that an executive really has nothing important to do.

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LEGISLATION COULD RESTRICT LAWN EFFORTS

Lafayette, Ind. — The do-it-yourselfer who cares for his lawn as a hobby, a challenge, or as a source of pleasure (even aggravation) could one day have his work restricted.

That's the feeling of W. H. Daniel, Purdue University extension turf specialist, who fears the time may come when homeowners are required to use the services of licensed firms for application of lawn pesticides.

Currently, competitive custom lawn services are available to those who wish to free themselves of turf management. But in most cities and smaller communities few people can afford this luxury.

The vast majority of homeowners institute their own weed control, crabgrass prevention, and grub control programs as a part of their outdoor activity, the specialist notes. An attractive lawn becomes a matter of pride with them. Furthermore, communities show concern when lots or lawns are unattended.

"The rising trend toward decrying all herbicides and materials, plus moves to restrict their application by anyone other than licensed services, may legally prohibit homeowner usage," warns Daniel. "Therefore, homeowners need to watch for environmental pollution legislation that may show up in their state."

Daniel believes there is a continuing need for education about and caution in the use of many herbicides. But, in the enthusiasm for pollution control, he fears well kept lawns by do-it-yourselfers may become a thing of the past. He urges homeowners to study proposed legislation and ask themselves if they really need this much protection?

BALANCE OF NATURE NEVER WAS —

Dr. Norman E. Borlaug, who recently won the Nobel Peace Prize for his wheat breeding program to feed underdeveloped countries, talked about the so called "Balance of Nature" while in New York recently.

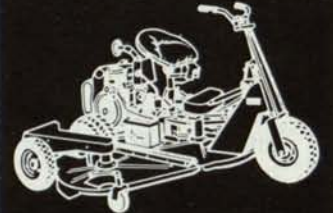
He said that as an ecologist, forester and scientist, he had never observed nature being in balance with anything. Rather, he said it had been his experience that nature dealt in one excess after another. Too much rain, too little rain, drought, forest fires, volcanic eruptions, disease, starvation and a host of other violent actions by nature which he has observed in his world travels have convinced him that any "balance" on the part of nature is simply another fairy tale.

Davis

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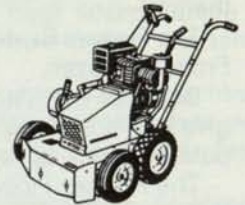
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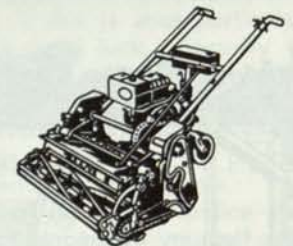
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Snake Talk

by Stanley Rachesky
Entomologist, University of Illinois

The fall of the year has arrived. Usually in the spring and fall of the year snakes can become an annoyance. They're often found sunning themselves on the patio or porch steps. Many a housewife has run into the house screaming after coming upon one while hanging up her wash on the backyard clothesline.

In Illinois we have three different kinds of poisonous snakes. The water-moccasin is only found in the very southern tip of the State. Copperheads and rattlers are widely scattered around the State. The farther north your travel, the less you will find. Chicagoland residents live too far north to find a Copperhead. The only rattler found in the Northeastern area of Illinois is the Massasaugas swamp rattler and this snake is found near rivers and other bodies of water. Coming upon a poisonous snake while tramping through the woods is about as likely as a trip to the moon.

All of the snakes mentioned are pit vipers and can be identified by the slit pupils of their eyes and pits between the eyes and nostrils. Non-poisonous snakes have round eye pupils and no pit between the eyes and nostrils. There are over two dozen different kinds of non-poisonous snakes in Illinois. The garter snake will be the most prevalent found.

Identify the snake by looking him straight in the eye and remember this:

- If the pupil is slit — don't get bit
- If the pupil is round — no harm to a hound

Snake problems in residential areas are becoming more frequent since the move to the suburbs. The chance of being bitten by a snake is almost nonexistent. Bites reported from poisonous snakes are rare. In fact, more people die from bee and wasp stings than from snake bites each year.

Total eradication of snakes is almost impossible. They will continue to move onto your property from surrounding areas. To help keep your snake population down, remove areas of tall grass, weeds, etc. Removing their cover will discourage them from remaining around your area.

Sometimes a high snake population is an indication that rodent population is high. Control your rat or mouse problem and the snake problem will decrease. No chemicals for use by golf course personnel are recommended for snake control. In most situations a shovel or club is sufficient to eliminate an occasional snake.

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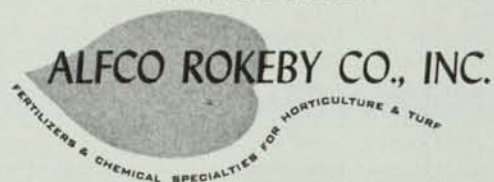
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We had to buy special Astro Turf tees, which are very pointed, that could penetrate the surface. Each golfer was given an Astro Turf tee for use on the second hole. Many golfers just dropped the ball on the surface and hit the best they could. Others teed up in front or on the side of the tee in the nearby grass. Teeing up the ball seemed to be the most objectionable feature of the Astro Turf.

Secondly, if the golfer's swing wasn't very accurate, a poor shot would result. If the club head came down too sharply, the golfer would have a jolt thru his club and body.

After two seasons we had to lift the turf and re-level the inside base sand. When we removed the Astro Turf the underside had thousands of tee points sticking thru the material that needed to be removed.

I was happy, to a point, with the Astro Turf, but the majority of my customers and members were not. We are in a business to make playing conditions as pleasant as possible and not to aggravate the golfers.

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