Mole Control —

(Continued from Page 19)

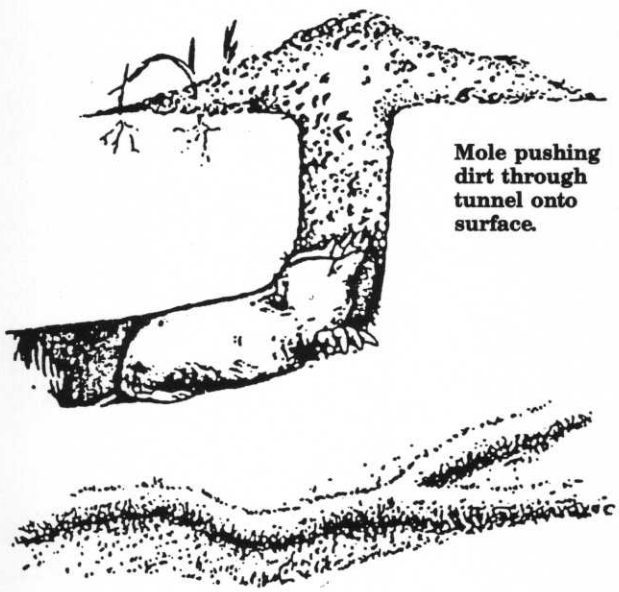
under a row of garden seedlings. The action is not malicious; the mole merely finds the going easier with more moisture and food in the freshly cultivated soil. Moles feed on both beneficial cratues, such as earthworms, and on harmful vegetable pests like grubs and other insect larvae or adult insects. Moles are not a problem during the winter.

Control

Poisons are often publicized as the solution to a mole problem. Peanuts, grains or other non-animal food materials are used as carriers for the poisons. However, since moles feed almost entirely on insects and worms, they do not readily take the poisoned baits. The result is poor control in most cases.

Mole poisons sometimes give a false impression of being effective merely by causing moles to abandon surface tunnels. This might happen if a mole is frightened by the disturbance associated with placing poisoned baits or the odor of the baits or if the poison kills the mole's food supply. Dry weather also sometimes forces moles into deeper tunnels in search of food.

Gas cartridges can sometimes be used successfully to fumigate a mole's tunnel system. Cartridges should be lit and inserted quickly into the tunnel, one every 15-20 feet, and the tunnel sealed with a piece of sod. Cartridges are available at some hardware stores or garden centers. The moles will be killed if you are lucky enough to catch them in their surface tunnels while you are fumigating. When using either poisons or fumigation, carefully read and follow all label instructions for safety and best results.



Mole pushing dirt through tunnel onto surface.

Only moles tunnel through the surface of the ground leaving ridges on soil surfaces.

Indirect Control

A serious mole problem indicates that moles have an abundant food supply. If the food supply can be eliminated or reduced, the moles will be forced to leave the area. There are several pesticides available that will kill white grubs (June beatle larva), other insects and even earthworms. Inquire at an Extension office or garden center about an appropriate pesticide.

There are several disadvantages to this approach. First, the necessary chemicals may be expensive, relative to other control options. Second, there is a delay of several weeks before any effect on the moles can be expected. Third, chemical control may harm beneficial creatures such as earthworms and may be detrimental to some ground feeding birds like robins by removing their food supply. Despite these problems, indirect control may be useful on valuable property where moles are a constant threat, such as golf greens.

Repellents

A plant called "Gopher Purge" or "mole plant" *(Euphorbia lathyris)* has been advertised in Wisconsin as a way to repel gophers and moles from a large area. The repellency of their plant has not been substantiated, and there is some potential that it could become a problem weed. It is also poisonous.

Trapping

Trapping is the most effective and efficient method of mole control in terms of time and cost. At first glance, the highly specialized mole traps that are available look brutal and dangerous to the user. In fact, the sudden death of the mole in such a trap is quite humane, and a reasonable amount of caution will prevent accidents to the trapper.

You'll have better trapping success, if you are mindful of moles' habits and behavior. For instance, a mole will become suspicious if its sensitive nose encounters something foreign in its runway. It's likely to back up and burrow around or under an ordinary trap set in its tunnel. But it won't be suspicious of dirt blocking a runway because farm machinery, people and animals frequently close burrows. A mole will usually push its way into such a dirt blockade, open it and continue on its way.

This habit makes the animal vulnerable to specially designed traps that straddle or encircle the runway — or are held suspended above it — with trigger pan resting on or hidden in a dirt blockade. With this arrangement, the unsuspecting mole can't detect the trap and, in retunnelling through the dirt obstruction, either lifts the trigger pan or pushes the dirt against the hidden trigger arm, releasing the trap.

(Continued on Page 23)

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Mole Control —

(Continued from Page 21)

Another thing to remember is that the mole is extremely sensitive to anything unnatural in its environment. Never tear up large sections of a mole burrow trying to locate a good spot for a trap. A poorly set trap is a detour sign for a wary mole.

Two good traps for catching moles are (1) the choker type and (2) the harpoon type. These traps are available at most garden supply or hardware stores or through garden catalogs. They are about equally effective. The harpoon type is more popular than any of the various styles of choker traps because it is more easily set.

Selecting a Trap Site. Another key to trapping moles is to place your trap in a frequently used tunnel. Traps must be placed in hunting tunnels, which are close to the surface and recognizable by their conspicuous ridges. Remember that these surface tunnels are made for the primary purpose of finding food. Many of them are not used more than once, while others serve as regular travel routes. Ordinarily, a tunnel that takes a more or less straight course for some distance, or seems to connect two systems of tunnels will be used frequently. On the other hand, a tunnel that has mouse holes or other openings is not being used; moles invariably repair such surface openings. You can identify tunnels in use by poking small holes in them or

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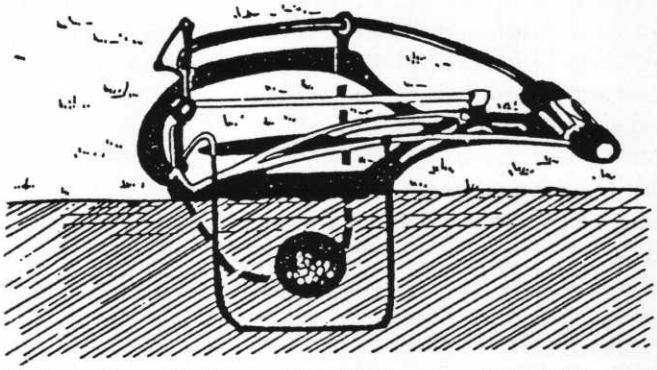
SETTING A CHOKER TRAP

Make an excavation across the burrow

Place set trap so jaws evenly straddle course.



Block section with damp soil, settle trap, and fill with loose dirt.

NATIONAL NEWS

USGA Establishes 'Wildlife Links' Environmental Program

The United States Golf Association has established an environmental program, "Wildlife Links," that represents golf's first comprehensive investigation of the game's relationship with wildlife and its habitat.

Wildlife Links will fund research, management and education projects needed to provide the game of golf with state-of-the-art information on wildlife management issues. The USGA will contribute $100,000 annually for the next three years to fund the program and has actively solicited additional funding from other golf organizations.

"Wildlife Links represents another innovative step we've taken to underscore the USGA's commitment to sound environmental stewardship," Reg Murphy, USGA president, said. "We invite other partners to join us in this effort so that the program will become a golf industry endeavor. As an example, we're delighted that the Golf Course Superintendents Association of America and the Ladies Professional Golf Association have already committed funds in support of this research."

The progam will be administered by the National Fish and Wildlife Foundation (NFWF) in Washington, D.C. NFWF is a nonprofit organization dedicated to the conservation of natural resources. Among its goals are species habitat protection, environmental education, public policy development, natural resource management, habitat and ecosystem rehabilitation and restoration and leadership training for conservation professionals. NFWF leverages its challenge grants to secure private funds for conservation activities. To date, NFWF has undertaken 1,205 projects in all 50 states, Puerto Rico and 17 countries, and leveraged over $152 million for fish and wildlife protection.

An advisory panel of experts has been formed to oversee implementation of the USGA program. Dr. Peter Stangel, director of NFWF's Neotropical Migratory Bird Conservation Initiative, chairs the panel. Other members include Kirk Andries of the International Association of Fish & Wildlife Agencies; Jim Felkel, U.S. Environmental Protection Agency; Dr. Mike Lennartz, U.S. Forest Service; Dr. Dan Petit, U.S. Fish and Wildlife Service; Ron Dodson, Audubon Society of New York State, and Jim Snow, USGA Green Section.

The program's overall goal is to protect and enhance — through proper planning and management — the wildlife, fish and plant resources found on golf courses.

"The Wildlife Links Program will provide golf course architects and managers with research information they need to improve and create habitat for wildlife," Stangel said. "We are very pleased the USGA has made this important commitment to conservation."

Certain issues will receive research priority. They include determining how golf courses can be maintained as biologically productive sites for wildlife, providing solid recommendations that can be incorporated into long-term management strategies and educating golfers and the general public about these issues.

Examination of individual golf courses within the context of their surrounding landscape will remain a major focus of Wildlife Links. Obviously, an urban golf course may require different strategies than a rural one, while desert courses present a much different landscape for wildlife than wetlands venues. Regardless of limatic orientation, however, the loss or gramentation of wildlife habitat and its effect on wildlife, especially birds, will be a major factor in research projects.

The first Wildlife Links initiative will be the production of two new publications:

The first will target golf course superintendents and provide guidance about how to enhance golf course habitat for bird species.

The second publication will be dedicated to wetland issues, namely how to maintain creeks, streams and ponds as hospitable habitat.

Research proposals for these two publication projects are now being solicited. Any qualified researchers who want more information should contact Dr. Peter Stangel, National Fish and Wildlife Foundation, 1120 Connecticut Avenue N.W., Suite 900, Washington, D.C., or call NFWF at (202) 857-5676.

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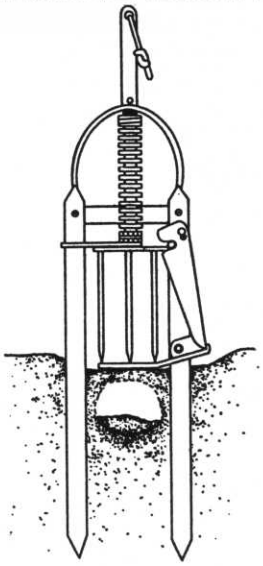
Mole Control —

(Continued from Page 23)

by stepping on them and determining next day which ones have been repaired.

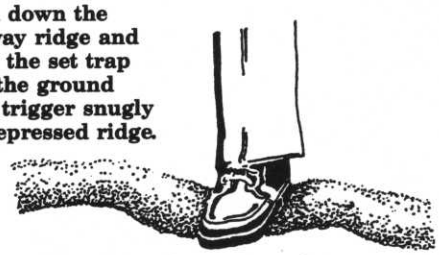
Setting a Choker Trap. In setting a choker trap (see illustration), it is usually necessary to make an excavation across the tunnel. Make it a little deeper than the tunnel and just the width of the trap. A garden trowel is handy for this. Note the exact direction of the tunnel from the open ends and place the set trap so that its jaws evenly straddle — or its loop encircles — this course. Block the excavated section with loose, damp soil from which all gravel and debris have been removed. Pack the soil firmly underneath the trigger pan with your fingers and settle the trap so that the trigger rests snugly on the built-up soil. Finally, fill the trap hole with enough loose dirt to cover the trap level with the trigger pan and to exclude all light from the mole burrow. If the trap fails to produce after two days, it can mean (1) the mole has changed its habits, (2) the runway was disturbed too much or (3) the trap was improperly set and detected by the mole. In any event, move the trap to a new location.

SETTING A HARPOON TRAP



Setting a Harpoon Trap. To use a harpoon trap (see illustration), merely pack down the tunnel ridge with your foot and push the set trap (with safety catch in place) into the ground so that the trigger pan rests snugly on the depressed ridge and the two pointed supports straddle the tunnel evenly. Release the safety catch, and the setting is complete. If the ground is hard or gravelly, spring the trap once to make sure that the impaling spikes easily penetrate into the soil for their full length. If they do, reset the trap without changing its position. If they don't, select a new place.

Pack down the runway ridge and push the set trap into the ground with trigger snugly on depressed ridge.



Much of the information about trapping techniques in this article came from "Controlling Problem Moles" by F. Robert Henderson, Cooperative Extension Service, Kansas State University.

Author: Scott R. Craven is a professor of wildlife ecology in the College of Agricultural and Life Sciences, University of Wisconsin–Madison, and a wildlife specialist with the University of Wisconsin-Extension, Cooperative Extension.

Maintenance-Friendly Washracks

By Scot Ender
Ruffridge-Johnson Equipment Co.

The days of cleaning a washpad by hosing the oil, sludge and solids down the drain are becoming a distant memory. New compliance measures form the Minnesota Pollution Control Agency and strength charges by the publicly owned Treatment Works have maintenance facilities looking for more economical and environmentally friendly methods of handling the by-products of washing equpiment and vehicles.

Take a look at your drainage trenches and sump collection areas. Are the grates and lids easily removable? Do the trenches readily separate oils and solids from the effluent? Is the collection sump capacity less than 150 gallons? Does your largest place of equipment fit easily on the concrete pad?

If you can answer yes to all of the above, then you are on your way toward having a maintenance-friendly and environmentally advanced washrack. If not, there are several ways to easily retrofit an existing washrack and plenty of plans available to construct a new one that will help meet and exceed present and future environmental requirements and make maintenance a snap.

Ordinarily the two biggest culprits for creating headaches are oils and solids. Luckily a good trench and pit design will go a long way toward eliminating these problems. The physical characteristics of oil and many solids are conducive to separating them from water. Oil, as we know, will generally try to float and most solids will attempt to sink.

But if you add emulsifying, high pH soaps to the mix, along with drainage design that doesn't slow the water down prior to discharge, then you are restricting the natural physical characteristics that allow for good separation. And if you don't get good separation of oil and solids, you will be looking at excessive hauling fees and strength charges or added filter and maintenance costs if you recycle.

Retrofitting a series of weirs and baffles into an existing trench is a simple task. These additions will slow the water flow and enhance oil and solids separation. Where would you rather manage solids, in a shallow trench or in an eight-foot deep sump pit? The easier the solids are to clean out, the more often it will get done, thereby avoiding potential discharge problems.

Smaller sump collection areas MUST be maintained more often than the oversized pit. This maintenance could prevent mucky solids from becoming a hazardous waste and could save you thousands of dollars in disposal costs.

If you're planning on building a new washpad, find some ideas other than the old center-trench drainage design. By anticipating problems, such as heavy solids, you can reduce maintenance time and avoid potential disposal problems.

One drainage design that is getting a lot of looks these days is the side clean-out design. This type of pad eliminates the trench drain altogether and captures oils and solids in an area that can be scooped out with a small front-end loader. What could be simpler?

Take a closer look at your washrack maintenance methods and time spent with such tasks. There's a good chance that minor changes could pay big dividends, not only in time saved, but also in potential disposal fees and environmental liability.

REPRESENTATIVES FROM PRECISION TURF greeted attendees at this year's MTGF Conference and Show at the Minneapolis Convention Center.

EDITOR'S CORNER

By Tom Johnson
New Richmond Golf Club

Last month, Greg Hubbard talked about the current position of the MTGF during an informational session. As with any new organization there have been growing pains the last two years. Money has been tight, so they have not been able to necessarily 'produce' anything to report. The money available has been used for producing 'Clippings' and other associated costs. What the MTGF has is the support of the U of M and its commitment to the possibility of developing a research center. This project has been identified as a goal by an advisory committee at the U of M. It looks like Dr. Phil Larson will be the U's lead man with the possibility of additional professors and graduate students having roles at this facility. Dr. Larson, who was familiar with Ohio State's research facility, will be in on the ground floor of developing this center.

The MTGF needs 100% commitment from all the allied associations and their members in the state. This commitment needs to come in the form of money, volunteer help and a common identity within the turf industry, and before results can be realized these must fall into place.

The question was asked what the MTGF will do for the MGCSA or any other affiliated organization for that matter. When you think in terms of politics, the total numbers or body count speak louder on a Legislative level.

* * * *

Another reason to wear a hard hat department. OSHA didn't have this in mind when requiring hard hats for safety. At the Mee-Kown G.C. near Mequon, Wisconsin, an employee was hit by shotgun pellets from a goose hunter while aerating a fairway. One pellet bounced off his hard hat and, thinking it was a rock flying up from the aerator, he kept on working. Later it was discoverd a pellet was imbedded in his neck. From now on at golf courses that have a goose problem, blaze orange hard hats will be required when the hunting season begins.

* * * *

Things worth doing. That statement doesn't embrace some deep philosophy, but just an everyday thought while at work or play. Is it worth doing? The question at least can help us separate what's really important and what's not. (You can fill in the blanks at any time). In general it's worth developing the habit of observation. I read a story about a woman who was legally blind but didn't feel her ability to observe depended on keen sight. She observed things that escaped most people with good sight. As a way of compensation, she listened to the leaves on trees and sometimes could identify the tree by how the leaves sounded when blown by a breeze. Birches have a small, quick high-pitched sound like falling rain. Oak leaves have a slightly lower pitch than birch. You get the idea. We can observe what's happening on our golf courses by all our senses, and it's worth cultivating our ability to observe to be better turf managers. Continuing your education is worth doing. It certainly is necessary in the changing role of the superintendent. But keeping an open mind and increasing your observation skills in itself make you more proficient in everything you do.

* * * *

Did you know your share of the national debt ($18,500) is about the cost of some of the new greensmowers?

* * * *

This will be my last column as Editor of *Hole Notes.* Thank you to those that have contributed articles the past year. These articles from members of the association add a necessary dimension when it comes to informing others in the MGCSA. Scott Turtinen and his staff deserve a lot of credit when it comes to putting each issue of *Hoile Notes* together, so many thanks to our Executive Director for all he does to bring you a fine publication. Brad Peterson has given us very useful information in the 'U of M Update' which ran in most issues. Congratulations to Jack Kolb for being chosen for this year's Watson Award! Jack has worked hard and supplied *Hole Notes* with a number of articles over the years. Please continue! It is everyone's responsibility to give something back to an organization to which she or he belongs. I've given it a whirl and I appreciated the chance.

* * * *

CORRECTION: It was pointed out to me by an irate Yankee fan that in an earlier issue of *Hole Notes*, I referred to him as a Mets' fan. That's like calling anyone in the metro area a Packer fan. My apologies to Dr. Frank Rossi!

Monty Montague, (left) National/Turfco, **Jeff Churchill** and **Joe Churchill** of North Star Turf relaxing at the Trade Show.