A shimmering, goose-free hazard guards the 17th green on the Edinburgh Course, a new addition to the Wentworth Club in Virginia Water, England. The Edinburgh is a John Jacobs Golf Associates design.

Two superintendents sound off on goose tactics tried & untrue

By TONY RZADZKI

I live and work possibly thousands of miles away from all of you fellow superintendents. But I decided it's time to relate my experiences and opinions about goose control. This has become a universal problem that you and I deal with daily and, as yet, no one has come up with a solution. To be honest, neither have I, but I am constantly experimenting with methods to manage this problem with the resident Canada goose.

Following are all the methods I know of that have been used to chase, scare or eliminate geese from our properties. The list reads in order of least effective to most effective. These are my opinions and I am sure it may cause a stir among us. But here goes:

1. Yelling, waving and flailing arms, throwing rocks.

Result: You look like a maniac.

2. Swinging golf clubs or chasing geese with your golf cart and swinging a club at them.

Result: A nesting goose might bite you. Once again, you're perceived as a maniac, and the geese get used to your behavior and crap even harder before they honk (laugh) and scoot 5 feet out of the way, only to dump again on another spot.

3. Installing plastic alligators or swans.

Result: The perception is lost — you are a maniac who definitely needs help. Plastic or foam animals placed in ponds doesn't last long. The geese quickly destroy them while playing their version of Johnnie cross-tackle with them. If you ever get on I-88 eastbound off the Route 59 ramp, you will see a deflated alligator in the corner of the pond. The geese now use him as a diving platform.

Live swans, from personal experience, do nothing to frighten or chase geese off

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Tony Rzadzki, CGCS, is the superintendent at Cantigny Golf Club in Wheaton, Ill.

By WILLIAM YANAKAKIS

Canadian geese are back! These words may produce cold chills down the spines of most golf course superintendents in the Northeast. The once temporary visitors and constant nuisances are becoming permanent residents on our ponds and fairways. They fatten up on our lush turf and leave in their wake enough excrement to increase your height by two full inches.

Over the past six years I have tried just about everything to alleviate this problem, from dogs chasing them, pyrotechnics hurled at them, to yet another futile attempt using artificial swans (a natural predator).

A new technique occurred to me while Christmas shopping in early October. I was walking through Toys R Us and passed by some remote control vehicles. A 2-foot boat was on display. After getting some information on price, range and operation I decided to give it a try.

Back at the course I was greeted once again by about 60 geese just sitting down to dinner. My dog, happily in pursuit, chased them into the pond. I started charging the nickel cadmium battery of my new toy.

Four hours later I hesitantly placed the boat into the pond. As it moved toward the flock, 60 long black necks turned as if in disbelief. I split the flock with my toy boat, then circled the pond. The geese couldn't leave the little pond fast enough. Amidst much honking and flapping of wings they took flight. My flock was gone.

Since then, smaller flocks have landed, but my grounds crew keeps watch and launches our boat at the first sign of uninvited guests.

It has been music to my ears this fall when the golfers ask, "What happened to the geese?"

William Yanakakis is Superintendent at New Meadows Golf Club, Topsfield, Mass.

Bioremediation, combined with aeration, gains practical acclaim

By DAVID M. ROSE

Ponds and lakes can be important assets for course managers, but they quickly become liabilities when problems like excessive algae growth and stagnation hold sway. Maintaining a healthy water hazard can be difficult and expensive, and chemical quick fixes can sometimes make matters worse in the long run.

Now a number of companies are taking a more natural approach to pond maintenance, enlisting the aid of beneficial microbes to clean up everything from heavy metals to duck droppings in a process known as bioremediation.

Perhaps the most common problem in pond management is eutrophication, a condition characterized by low oxygen levels and excessive algae growth. Eutrophication is caused when excessive nutrients are introduced into the water in the form of manure, grass clippings, or fertilizer runoff. This influx of nutrients results in an algae bloom, which robs the pond of oxygen and can cause odor problems as dead algae decays. This decay releases more nutrients and algae bloom again, in a recurring cycle.

When faced with an algae bloom, managers may be tempted to apply chemicals like copper sulfate. But while these agents will kill the algae, they can't break the cycle of eutrophication, according to Tom Lubin, an independent lake management consultant based in Cypress, Calif.

"A lake is a living system," said Lubin, "and you can't put enough chemicals in to kill everything and expect that it's going to smell good after six months, because it's still going to have this dead material on the bottom."

One solution to this problem is to encourage the growth of beneficial microbes by using aeration equipment. By increasing the pond's oxygen content, the growth of beneficial aerobic micro-organisms is encouraged. This growth consumes nutrients, inhibiting algae blooms. Moreover, the breakdown of dead material at the bottom of the pond is odor-free in the presence of sufficient oxygen.

While aeration alone is often effective, the process can be slow. To give the cleanup process a boost, Enviro-Reps International of Camarillo, Calif., manufactures Super-Bugs, a mix of 11 different bacteria and seven enzymes. Available in dry or liquid form, application of Super-Bugs combats algae growth by consuming nutrients and out-competing algae.

"The enzymes break down the larger waste products, making it easier for the bacteria to further process things," said Bob Friedman, co-owner of Enviro-Reps. "Because Super-Bugs contains billions of bacteria per gram, they very readily digest the nutrients. When used in conjunction with aeration, they are even more effective."

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Bioremediation

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Lambda Systems of Columbus, Ohio, also uses bioremediation to clean up polluted waters. In contrast to the "off-the-shelf" methodology employed by Enviro-Reps, however, the Lambda Systems approach is carefully tailored to each individual site, using only micro-organisms indigenous to the area being treated.

Lambda has successfully treated both eutrophication and a laundry list of more dangerous pollutants including heavy metals, hydrocarbons, pesticides, herbicides, and, as Lambda's Jo Davison put it, "Just about anything but snake venom."

A case in point is the Portland (Maine) Country Club. In 1989, when Lambda was called in, Portland's ponds were heavily contaminated with toxic levels of heavy metals and other pollutants. "We had three barren ponds," said Davison. "The microecological population was practically gone, and the only thing that would grow was cattails."

Micro-organisms native to the site had the inherent capacity to clean up these toxins, according to Davison. But the rapid accumulation of high levels of pollutants had killed off these microbes before they could do their work. Lambda's approach to this problem was to restore the compromised ecosystem by improving existing microbes.

"You've got to bring the bugs up to a higher level of competence where they can degrade these things," Davison said. Treatment of the Portland site began with a rigorous, seven-month evaluation period. Lambda took numerous soil and water samples, and painstakingly identified the micro-organisms which make up the area's microecology. Once identified, these micro-organisms (300-400 in all) were grown in the presence of gradually increasing levels of contaminants. As a result, the microbes became acclimated, increasing their natural capacity to resist and degrade pollutants.

"This is a natural process that would happen anyway on its own," stressed Davison. "But we work with the natural ecosystem to speed its evolution up by about 75 to 100 years. The bugs are harmless when we get them, and they're harmless when we put them back. They're just more efficient."

Once the microbes have been acclimated, they are reintroduced to the site. At Portland, burlap sacks of activated charcoal loaded with micro-organisms were applied at a cost of $35,000. These "bioreactors" sat quietly at the pond's bottom while the microbes did their work.

"There was a tournament going on at the time," said Davison, "and they didn't even know what we were doing."

The results at Portland speak for themselves. After a month, levels of lead, mercury, and other toxins were reduced to drinking-water standards. "The bugs have repopulated the ponds, and they can continually clean up pollutants that wash in," said Davison.

"We're very happy," said Portland superintendent Pat Lewis. "The water quality is excellent, and fish and birds have returned."

In 1994, four years after the original application and with no further intervention, the ponds were certified as an Audubon wildlife site.

Despite such success stories, Lubin warned that superintendents should not regard bioremediation as a cure-all or quick fix. "Too often, people are looking for a magic bullet, and it just doesn't exist," he said.

Like any other approach, bioremediation will only be effective if the individual characteristics of the site (including such things as oxygen content, pH, and nutrient composition) are taken into account. Results in places like Portland, however, demonstrate that with careful application bioremediation can turn a problem pond into a sustainable, balanced system that works.