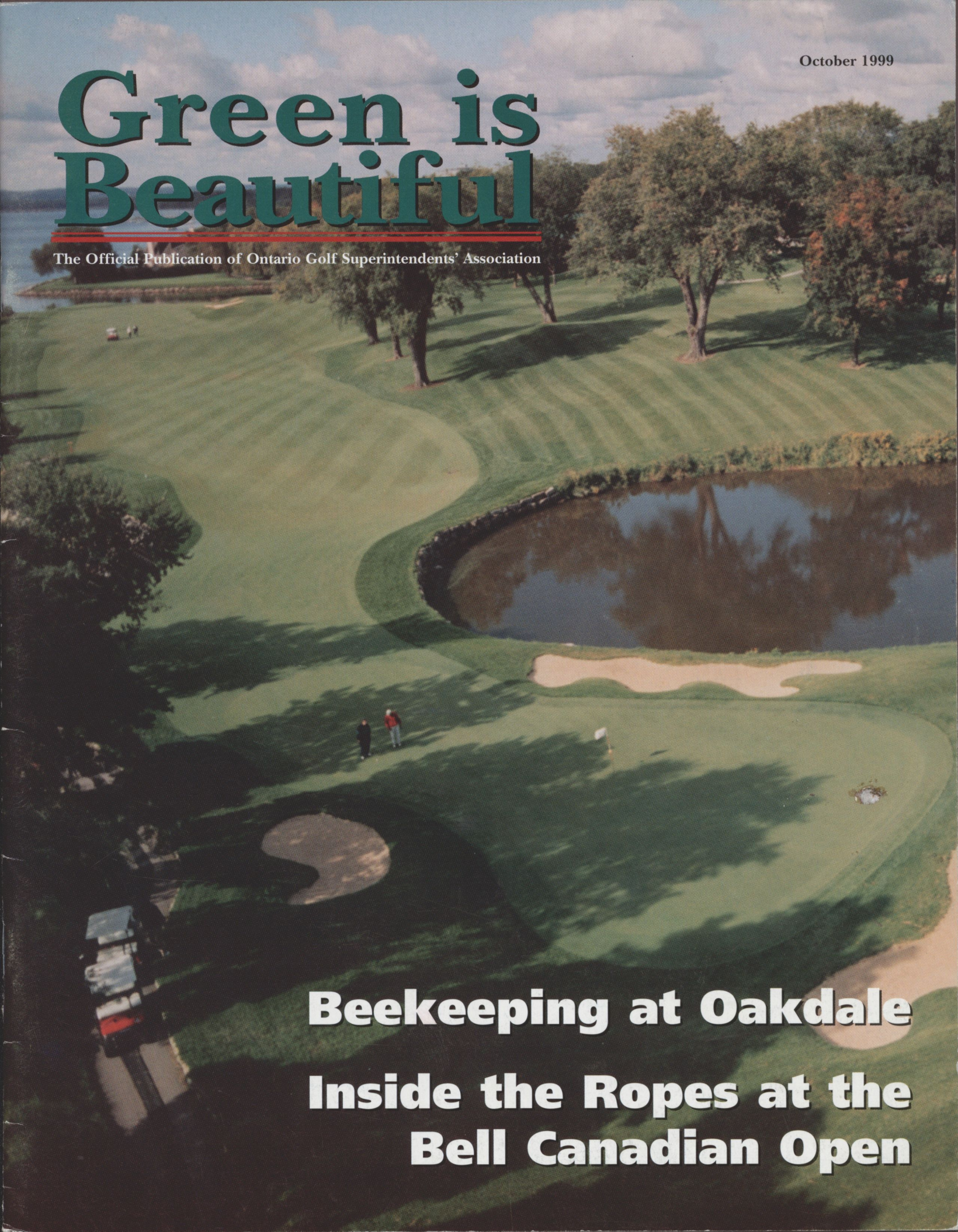


October 1999

Green is Beautiful

The Official Publication of Ontario Golf Superintendents' Association

An aerial photograph of a golf course. In the foreground, a golf cart is parked on a path. The course features a large green with a sand trap, a smaller green with a sand trap, and a large pond. Several trees are scattered throughout the landscape, casting shadows on the grass. A few people are visible on the course.

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Contents

BEEKEEPING AT OAKDALE	12
1999 OGSA heritage award	9
\$1,000 ⁰⁰ Turfgrass scholarship award	17
Due diligence – what is it?	10
Fair weather for field day	15
Gord Witteveen's retirement day	16
Health and safety	5
Inside the ropes	8
Irrigation audits	14
Looking back	23
Prep-work to avoid ice damage	18
President's message	4
Tip of the month	9
Working in a sensitive environment	21

Advertisers

Albion Golf Cars and Turf Equipment	19
Almack	19
Braemar Building Systems	15
Century Rain Aid	20
DOL Turf Restoration Ltd.	4
The Fruit Farmer	23
G.C. Duke Equipment Ltd.	2
Graphic Services Ltd.	4
Hutcheson Sand and Mixes	21
Loraday Environmental Products Ltd.	11
Maple Farm Supply	18
Nu-Gro Professional	15
Nu-Gro Professional	23
Nutrite Hydro Agri Canada L.P.	19
OSC Seeds	5
Professional Lawn Care Association of Ontario	9
Pelee Industrial	13
Plant Products Turf	17
Skyway Lawn Equipment Limited	22
The P.E.S.T. Institute	8
The Scotts Company	18
Turf Care Products Canada – Irrigation Division	22
Turf Care Products Canada	24
Vanden Bussche Irrigation & Equipment Limited	5
Zander Sod Co. Limited	19

Green is Beautiful

The Official Publication of Ontario Golf Superintendents' Association



COVER PICTURE
Burlington Golf
& Country Club

President's message

Benefits of being a member

The benefits of belonging to an Association are as broad as they are numerous. Our Association was built on pride, respect and for the betterment of the game of golf.

The Ontario Golf Superintendents' Association, was founded in 1924 by superintendents wanting to invest in their futures. Their purpose was to promote fellowship within our industry for the betterment of the game. Today, this same time honoured tradition continues within our Association. There are many visible benefits of being a member of our Association: Green is Beautiful; Ontario Turfgrass Symposium; Networking; Education and Scholarships; and Professional Image. These benefits give credibility to you as a professional within your club and the golfing industry. I am sure there are many more benefits to belonging to the Ontario Golf Superintendent's Association, that I have failed to mention. However, those mentioned above have the greatest impact on you as a Superintendent.

Invest in your future, by becoming a member of the Ontario Golf Superintendents' Association.



Ian Bowen
Oshawa Golf Club



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Health and safety

by Doug Johnson
First Aid & Safety Supplies

Over the last few months I have written a number of articles about safety on the golf course and I read, with interest, the article by Geoff Perkins. Mr. Perkins briefly discussed some First Aid. This started me thinking that First Aid was a subject that kind of got left out of the mix.

It may be late in the season but it is not too late to think of next year, so here it goes.


As superintendents, you have a responsibility to ensure that there is an adequately stocked First Aid kit available and a defined emergency response program if an injury occurs. There are some minimum requirements for this First Aid kit depending on the number of employees you have at your workplace. You can find the minimum requirements listed in the Workplace Safety and Insurance Board (WSIB) Regulations 1101. Call me or the WSIB and make sure you have a copy on site and with your First Aid kit.

Every workplace must also have a worker trained in First Aid on each shift.

Also, remember that all workplaces require an eyewash fountain that is readily available to the workers in the event of an eye injury.

I believe that as safety conscious employers, it is imperative that you go beyond the minimum. It is a good idea to stock extra items that are pertinent to your type of work. You should consider the type of work you are doing and prepare yourself for the potential injuries by reviewing your accidents and discussing your needs with a competent supplier.

Here are some of the extra items you might consider having at your First Aid station: first aid cream, forceps, sting stop, no bleed, antiseptic solution, 2nd Skin for burns, Finger Tip and Knuckle bandages, butterfly closures, cold packs, tensor bandages, a CPR disposable rescue breather, at least one roll of one inch wide



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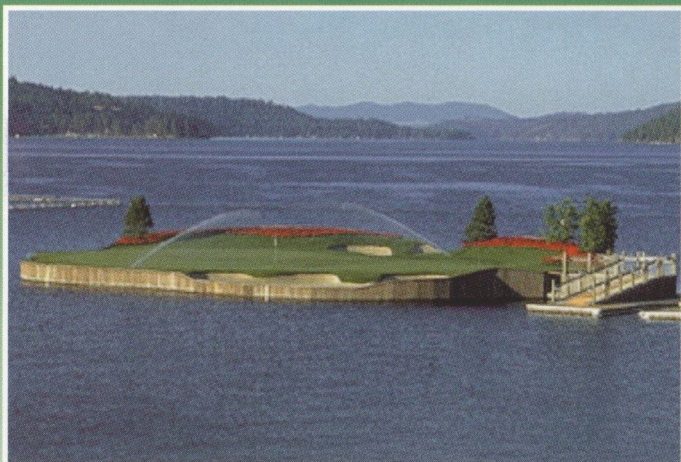
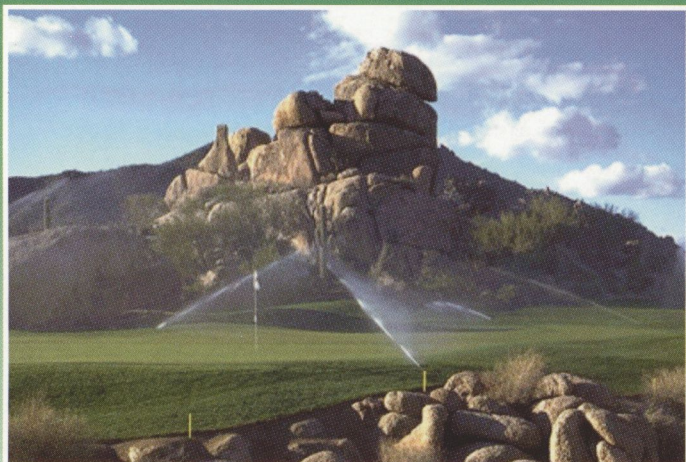
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David Schmelefske
A. Kent McDonald

adhesive tape, and a good quality pair of bandage scissors. There may be other items that are pertinent to your operation. If you have questions or comments please call and I will try to help you.

Enjoy the fall. Let's hope it's a long one like last year!

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An Asian Long-Horned Beetle

N. Humphreys, E. Allen and L. Humble

Canadian Forest Service, Pacific Forestry Centre

An Asian long-horned beetle (ALB), *Anoplophora glabripennis* (Motschulsky) (Coleoptera: Cerambycidae), has been intercepted in 1997 at various locations throughout North America. This beetle is native to Northeast Asia and is a serious pest of hardwood trees in China. In British Columbia and Ontario, the interceptions have been associated with wood packing material in shipments of metal pipe and wooden spools used for shipping cable or wire rope. There is no evidence that this species is established in Canada, but the detection signifies a potential threat to Canadian forests.

The Threat

- This insect attacks and kills healthy trees.
- It has no known natural enemies within Canada's forests.
- The majority of Canadian broadleaf trees would be susceptible.
- Most hardwoods would be at risk, including native and hybrid poplars, red alder, bigleaf maple, arbutus, willow, bitter cherry and various fruit trees.
- The climate of some southern portions of Canada is particularly amenable to the establishment of this insect.
- Recent infestations in New York (1996) and Chicago (1998) have resulted in the removal of over 2000 trees and millions of dollars have been spent on survey and control.



All photos: Ken Law, USDA

Adult Recognition

Body: large (20-35 mm long and 7-12 mm wide); elytra shiny black with up to 20 white dots; prominent pair of spines in front of elytra

Antennae: longer than the body with 11 segments; each segment is black with a whitish-blue ring at the base

Legs: black, tinged with a whitish-blue colour; tarsi prominent, with whitish-blue upper surface

Hosts

Most hardwood species, but especially:

- maples (*Acer*), Norway, red, sugar, silver, boxelder, sycamore;
- horsechestnut (*Aesculus*);
- elms (*Ulmus*);
- poplars (*Populus*); and,
- willows (*Salix*).



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Asian Long-horned beetle larva

Larva Recognition

Prothorax has a brown mark with no brown margin at the front of the mark; 50 mm long fully grown



Asian Long-horned beetle pupa

Pupa Recognition

Off-white, protruding structure at eighth segment of abdomen; 30-33 mm long and 11 mm wide



Beetle and galleries



Asian Long-horned beetle exit holes

Life Cycle

In its native range, this insect may have a one- or two-year life cycle. It has the ability to overwinter as an egg, larva or pupa.

Egg:

- hatches in 11 days
- June-July (1-year cycle)
- September-October (2-year cycle)

Larva:

- early instars feed in the phloem
- late 4th instars move into the xylem

Pupa:

- in early spring, mature larvae pupate in the wood

Adult:

- begins emerging in May
- populations peak in early July
- flies for 2-3 days to feed and mate
- females make grooves in host tree branches to lay eggs

Symptoms and Damage

Adults feed on the leaves and bark of trees causing considerable damage. They prefer to attack the shoots of host trees causing the young shoots to wither and die. The female chews round or lip-shaped grooves on branches in preparation for laying eggs. Young larvae feed in the sappy, green inner bark causing the bark to become concave. Mature larvae bore into the heartwood of the tree, and create large, winding galleries in the inner wood, eventually killing the host. Emerging adults chew their way out of the wood creating large, circular exit holes and heavy, coarse wood fibres on the ground.

Attacked trees are also prone to secondary attack from other insects and diseases. Yellowing foliage and premature leaf drop are other indicators that the insect is present.

What to look for

- Oval to round darkened wounds in the bark may be oviposition sites, where adult females chew a place to lay their eggs.
- Large (9-11 mm) round holes anywhere on the tree including branches, trunk and exposed roots. These are the sites where adults exit from the tree.
- Large piles of coarse sawdust around the base of trees or where branches meet the main stem, indicating larval feeding.

Increasing global trade and rapid transport of people and materials require us to be increasingly alert to both the import and export of pest-infested wood products. The Canadian Forest Service requests your assistance in reporting any suspected sightings of this beetle or its damage.

Pacific Forestry Centre, 506 West Burnside Road, Victoria, B.C. V8Z 1M5
Phone: (250) 363-0600 Fax: (250) 363-0775 <http://www.pfc.cfs.nrcan.gc.ca>

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Inside the ropes

by Randy Booker, Superintendent
Sleepy Hollow Golf Club

There I was standing on the first tee at Glen Abbey Golf Club during the third round of the Canadian Open waiting for my 11:09 tee time with Joe Ogilvie and Canadian Craig Matthew. The crowd was huge and full of excitement waiting for us to tee off. It was a beautiful site, the sun shining, the wind blowing, spectators cheering and green grass as far as the eye could see. Joe Ogilvie's caddy introduced himself as "Z", that was "Zee" not "Zed" and was adamant that we all understood. Then it was time to spring into action. Joe Ogilvie stood there with his Titleist 975, Craig with his Ping ISI and myself with my Accuform, all set to go. What a picture!

Just in case you're lost, let me explain. Early in August I received a letter, as many of you also did, from the RCGA and Rob Field of Nu-Gro, inviting area superintendents to take part in a new and unique idea for the 1999 Bell Canadian Open. During the final two rounds of the Open the bunker raking was going to be done by "The Bunker Men" as many spectators referred to us. Each volunteer was assigned to a twosome as their bunker raker and would follow the group throughout the 18 holes and "professionally" rake the bunkers after play.



Jamie Comba, Bunker Foreman, 1999 Bell Canadian Open

"What an idea!! Sure beats watching golf from outside the ropes and the confines of the crowds", was my first thought. So off I went to rake bunkers. Upon arriving at the Nu-Gro marquee tent and being greeted by Rob and Kaala I was issued our uniform – a shirt, hat and wind vest so that we all looked the part of professional rakers. After a few instructions I made my way to the first tee 10 minutes before my tee time, anxiously awaiting my trip inside the ropes. The feeling of walking past the Marshals, through the ropes and onto the first tee beside the caddies and PGA players just set the tone for the rest of the day. Not knowing what to expect, I just quietly stood off to the side with rake in hand. It didn't take too long to be pulled into the group with Joe Ogilvie's caddy, "Z" extending a warm smile and hand shake as we introduced ourselves. "Hope we don't make you work too hard today" were the words from PGA tour player, Joe Ogilvie, as we shook hands and I then wished former Canadian Amateur champion, Craig Matthew, good luck.

After all the small talk was done, it was time to get serious as both players boomed drives down the first hole and off we went. With my rake in hand and making sure not to get in anyone's way, I was living a dream, except for the fact that I was carrying a rake – not a golf club. I spent the first few minutes looking at the people outside the ropes and wondering what they were thinking while they watched me walk past them with my trusty Accuform. It didn't take long for that question to be answered. While waiting for both players to hit I overheard a little boy ask his father "what's that guy doing with the rake" and his father replied, "he has to rake the sand after they hit out of it." With my chest a few inches bigger by now I proceeded to the first green where neither player had hit into a bunker.

It wasn't until the third hole that I was put into action as Joe Ogilvie landed in the par 3 greenside bunker. After his shot, I made my Canadian Open debut and jumped into the sand and raked my heart out before they were ready to putt. Throughout the next 4 hours I was only put to work 6 more times and enjoyed them all. The 18th hole arrived too soon for my liking, but the day had to end

sometime. After both players finished and made their way towards the scoring trailer they made sure to stop and thank me for my participation with signed golf balls as a reminder of the day. "Z" made sure to thank me for doing one of his many duties as a caddy, allowing him to spend more time with Joe Ogilvie, reading putts instead of raking sand.

As my guest and I arrived back at the Nu-Gro marquee, we were greeted by many smiling faces and stories of the day. The hospitality was fantastic and the food terrific as we all sat back and relived our exciting day. The chance to walk with the players and talk with the caddies during their round and see their ups and downs of the day was an experience that I would invite all golfers to have. Thanks goes out to the RCGA and Nu-Gro for the opportunity to be part of this project. I won't ever forget it.

Neither player shot the lights out of Glen Abbey that Saturday but being right there with them throughout the 18 holes gave me a greater appreciation for what these players have to deal with – the crowd, tough course conditions, their emotions and of course, wondering about this week's paycheck.

We all tend to forget that these guys are human, but as the commercials state "THESE GUYS ARE GOOD"!

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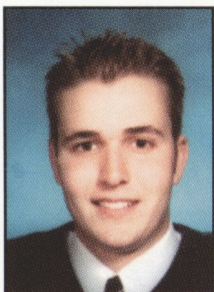
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1999 OGSA heritage award



*I*t is an honour to have been chosen for the 1999 OGSA Heritage Award. This will go toward my education at McMaster University, where I am currently enrolled in the Science I programme, which hopefully will lead to my goal to become a doctor. To prepare for this challenge, I balanced OAC subjects in maths and sciences, extra-curricular activities and a job. I also volunteered as a coach of the

Special Olympics swim team, as well as being involved with the "One-to-One" programme in Peel Region. Working with developmentally challenged young people, in a team situation, as well as on an individual basis was a tremendous experience. I gained skills like leadership, organization, communication, responsibility, patience, and hard work. These skills should be helpful in the near future, as I continue to balance a course load of biology, physics, maths, chemistry and psychology.

Winning this award is a real honour as I have also had the opportunity to work the past three summers on the grounds crew at two Ontario golf courses and hope to continue to do this for future summer jobs. Through this experience, as well as growing up as a child of an OGSA member, I can truly appreciate what golf superintendents face every day. It is not as easy as it looks and the OGSA and all golf superintendents should be congratulated for their hard work in creating a pleasurable industry in an environmentally friendly way.

My thanks to the OGSA in recognizing me for this award.

Ryan Dick

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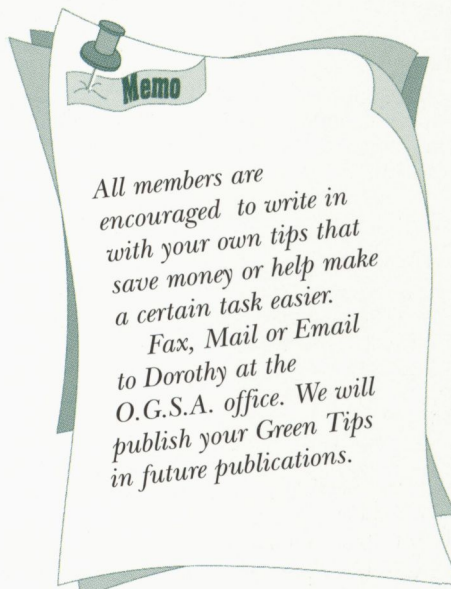
attn: Cory Janzen

Tip of the month

A little dab unscrews it

When removing worn or extremely tight Phillips-head screws, place a dab of valve grinding compound on the screw or screwdriver tip to provide more friction. Works great!!

Larry E. Albright
Grovebrook Golf Club
Grove City, Ohio



Due diligence - what is it?

Examine Your Present Practices

- Still using a single walled steel tank on a stand, filling by gravity feed?
- Still storing your regulated / controlled products in a structure, building and / or device that has not been examined by Underwriters' Laboratories of Canada (ULC)?
- Looking at the 3" binder, "the CGSA ~ Environmental Management Resource Manual (EMRM)" and simply trying to find the time, to get to it?

Having worked with many of the Golf Course Superintendents, we are finding three primary barriers to **TOTAL COMPLIANCE**:

- Finding the time to become sufficiently educated on the Fire Code, Building Code, Occupational Health & Safety Act, and Environmental Compliance Requirements,
- Finding the money, through the Board of Directors, to identify and then resolve the compliance issues,
- Finding the tools to simplify the understanding and implementation of solutions that afford **TOTAL COMPLIANCE**.

There is no doubt about it; the number and sheer complexity of the regulations that effect the liability of the Golf Course Superintendents is overwhelming. The EMRM consolidates many of the requirements that affect each Superintendent. It also illustrates the consequences of not reacting, provides guidance on key issues to be addressed and outline some solutions that should be explored.

However, as with any tool of this kind the EMRM could not be specific to every issue because, changes in the legislation and the industry make compliance at any one time a "moving target." Examples include, but are not limited to:

- Punitive requirements as of the 1997 edition of the fire codes & the fire Marshals' Act, include a fine for not having an Emergency, Spill and Fire Safety Plan prepared,
- The advantages of ULC Listed Protected Tank Assemblies, and
- The introduction and use of Storage Vaults for container storage [ULC/ORD-C142.6]

Punitive Requirements

Did you know; there's potentially a \$50,000 dollar fine for not having an Emergency, Spill and Fire Safety Plan prepared in accordance to the new 1997 edition of the Ontario Fire Code?

Protected Tanks

Did you know the safest tank assembly available in Canada, according to the National Fire Code and the Ontario Fire Code is not even proposed within Part 4 of the EMRM? The EMRM; Part 4, examines fuel tank storage and recommends double walled steel tank assemblies as one solution to the replacement of underground & single walled aboveground tanks. The National Fire Code of Canada and the Ontario Fire Code recognize Protected Aboveground Tank Assemblies as the safest tank assembly in Canada. To illustrate this position the National Fire Code of Canada and the

Ontario Fire Code allow Protected Aboveground Tank Assemblies to be installed:

- Under "ZERO" clearances from buildings and property lines. [A benefit that may work well when the tanks need to be located in proximity to the general public.]
- Without unsightly vehicle impact protection barriers. [Mandatory for other tank assemblies/installations.]

Storage Vaults

The EMRM does not examine the use of Storage Vaults for container storage. This new Underwriters' Laboratories of Canada document was created after the publication of the EMRM. The purpose of the document is to establish the minimum design and testing criteria to ensure a sufficient level of fire and environmental safety of a structure used for storage and limited dispensing of Dangerous Goods. [Including; Flammable & Combustible Liquids, Herbicides, Pesticides & Fertilizers].

Other issues not addressed by the EMRM, specific to Ontario include

- New requirements in the 1997 edition of the Ontario Fire Code,
- New 1997 Ontario Fire Code mandatory upgrade deadlines:
- August 1998 Emergency, Spill and Fire Safety Plan must be in place,
- August 2000 all storage areas must be upgraded,
- August 2002 all storage tanks / tank systems must be upgraded.
- New requirements in the impending release of the Gasoline Handling Code,
- With the impending release of the 1999 Gasoline Handling Code there will also be new compliance requirements for tanks used to dispense fuel into vehicles.
- The Environmental Protection Legislation in Ontario, which is written to ensure that the owner is responsible for compliance to all other code requirements when meeting the Guidelines for Chemical Storage Facilities.
- Impending legislative reactions to agreements signed in Kyoto, Japan and with the State of New York to reduce Green House Gases [Vapour Recovery].

Industry Trends to Watch

With the impending reaction from Environment Canada and the Ontario Government on vapour recovery, to keep their commitments abroad, the next five years could be very interesting indeed for the tank industry! If Canada follows the USA example, many aboveground tanks will need to be upgraded to meet vapour recovery requirements. Based on the best available information, the only testing protocol to verify Phase I & Phase II Vapour Recovery is the standard and test procedure created by the California Air Resources Board [CARB]. In order to pass CARB testing aboveground tanks need to have an insulation barrier. This means that all golf courses that own a non-insulated double walled steel tank assembly maybe required to replace it if Phase I and / or Phase II vapour recovery testing is introduced! Most, if not all, Protected Tanks have

been "Certified" by CARB, meaning that they can pass the performance testing when equipped with proper accessories on the filling and dispensing systems. Unfortunately this leaves a very strong "buyer-beware" caveat, so as the buyer one should look into this and ensure they understand the issues and the trends.

As we move into the new millennium with our governmental fiscal houses coming into order there seems to be less resistance to accepting and implementing environment protection measures that will enhance our ability to hand over a cleaner environment to our children. This trend has a significant cost burden attached to it when you contrast it to the economics of making today's fuel tank purchase.

Defining Due Diligence

The EMRM; Part 2, clearly plants the seed that noncompliance and / or failing to react effectively to the legislative requirements of the Acts, Codes & Guidelines could lead to significant reaction, mostly punitive in nature, by the regulatory authorities. So how does the Superintendent protect; firstly, himself and secondly, the course owners, directors and management?

Under the requirements of "Due Diligence" as established by the courts, the Superintendent has a duty to identify the non-compliance issues and present the same to owner or the Chairman of the Board in a written format, including a request for corrective action. Following the receipt of the report the Owner or Chairman is obligated to outline the plan for meeting the compliance requirements and then empower the Superintendent with the ability to bring the course into compliance by the proposed deadlines. (See 1997 Fire Code deadlines.)

With only one fiscal budget to work with before the deadlines sneak up, it is imperative that the Superintendents seek qualified help to conduct an assessment of their storage practices today. To achieve this the Superintendent needs to make a key decision. Do they wish to expand on their present code knowledge sufficiently enough to assume the liability of doing a self-assessment or is it more practical to use the experience of a qualified person to reduce their inherent personal liability?

In selecting a qualified person; the Superintendent should be questioning any consultants on their understanding of all the code documents, accredited standard development organizations and their activity within the organizations that create and administer the requirements. With the time frames before the Superintendents in many cases "Due Diligence" will require that the Superintendent seek out a qualified person to put together a written report and provide the Superintendent with this most important tool toward achieving TOTAL COMPLIANCE.

Christopher H. Harper

Mr. Harper has been working with the fire code committees, the Gasoline Handling Code Committee and the ULC Fire Council since 1990 in the development, interpretation and application of the UL & ULC Protected Aboveground Tank Standards Document and the impending ULC Storage Vault Standards Document. He is the National Sales Manager for Enviro-Tec Inc., Safety Storage Specialists.

Is Your Club on Par?



Thinking green isn't just about the colour of your course. It's about ensuring your facility is in total compliance with present and expanding codes, and with the CGSA Environmental Management Resource Manual.

With the number and sheer complexity of the regulations that affect the future of golf course superintendents, it is difficult to find the time and resources to conduct a thorough assessment of your current practices. Our program can help. Our qualified personnel have knowledge of the codes and the experience needed to assist you in reducing the inherent liability of doing a self assessment.

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Beekeeping at Oakdale

by Mark Prieur,
Foreward by Paul Dermott

Beekeeping has always been a subject of interest to me, especially with Oakdale Golf and Country Club's involvement in the Audubon Cooperative Sanctuary Program. It has become more than an interest when Paul Brown of Sarnia Golf Club gave me two hives and some extracting equipment to get started. We currently have five hives on the property with potential for more. Some of the staff have taken an interest in the endeavour and have been looking after this project which takes little time as the bees do the majority of the work if we keep them healthy. Beekeeping may be something you might want to consider for the environmental benefit of the golf club in addition to your own enjoyment. I have asked Mark Prieur to write this article as he is doing the majority of the beekeeping at the present time.

This article is aimed at giving you a brief understanding about beekeeping and a little how-to knowledge. When Paul first asked me to start beekeeping I thought I would get stung a thousand times over. The way it turns out, I have never been stung (yet). If there is one message that I would like to make clear it would be how easy and fun beekeeping really is. When you first start in the spring by putting on the honey supers when the course is just starting to



Inspecting Hives

bloom until late summer when you are extracting the honey, it is all rewarding.

Why have bees on a golf course?

Bees on a Golf Course have a variety of benefits.

1. *Increased pollination on fruiting trees such as cherries, apples and pears.* Bees have been used to pollenate many crops throughout the world. Some of which include cotton, berries and canola. Increasing pollination through bees expands crop yield.
2. *Larger earlier blooms on fruit trees.* Trees pollinated by heavy populations of honeybees experience earlier and larger blooms. This is due to the fact that almost every bloom is pollinated whereas scattered pollination may occur with a lower bee population.
3. *Increased fruit production leads to greater bird populations that are attracted to the area.* It is obvious that when you increase the food available for any species, they will flourish. Last year on Audubon bird watching day, Oakdale logged twenty-six different species of birds. Squirrel, chipmunk and fox populations also increased for the same reason.
4. *Honey Production.* Healthy hives can produce an average of 125 to 140 pounds of honey each year. Each super (honey box) has ten frames each weighing two-and-half to three pounds. Sometimes there are multiple supers (depending on how strong your colony is) which makes for double the honey.



Removal and inspection of a frame to see how production is progressing

The Hive

Each hive (or colony) consists of one queen bee (the fertile female), approximately 60,000 worker bees (the infertile females) and a few hundred drone bees (the fertile males). The sole purpose of the queen is to keep producing more bees so the colony can survive. She lays one egg in each cell and the worker bees take over from there. The worker bees cap and seal the eggs (often called brood) and care for them until the brood matures into bees. Worker bees are also responsible for cleaning, foraging and guarding the hive. The drone bees only role is to mate with the queen.

What makes a colony unique is that there is no individualism in a colony. A worker bee can live for two to four months and a queen up to five years but a properly managed and clean hive can survive indefinitely.

continued on page 13

How is it done?

The first thing you will need is a lot of patience, without this, beekeeping will become a chore. When it is thirty degrees outside and you are in your suit sweating, banging bee frames around in a panic is the last thing you want to be doing. The Bees can sense fear and agitation, the same as dogs.

Next you need to read up on beekeeping or take a course. The University of Guelph offers this by correspondence. Reading up on the lifecycle and habits of the honeybee will give you better understanding of how beekeeping works. OMAFRA also has various publications, which are helpful for identifying diseases and pests for honey bees. Becoming a member of the Ontario Beekeepers Association (OBA) has also been a great benefit.

Your local beekeeping supply store is where you can pick up your specialty equipment such as hive tools (which are like tiny crowbars), frames and extracting equipment. The suppliers are also a great way to get free advice about any problems you might have. In addition, your provincial apiarist can come in and inspect your

hives if you really start to have problems; they are a great source of information.

After time you will learn to cut some corners by building your own parts. You can build your own hive stands and bottom boards but don't skip out on the hive bodies and frames. The specifications for these are exact and if the spaces for the frames are too wide or not wide enough the bees may start to draw irregular comb which will make honey virtually impossible to harvest.

Harvesting usually is done mid-to-late July, by then, the supers can weigh as much as one hundred pounds. Basically, the frames are full of capped honey and harvesting involves uncapping and spinning the frames to remove the honey. Once the honey is removed from the frames it is then strained to remove wax cappings and is then ready to eat. There are no additives or preservatives in pure honey (hence the name pure). The shelf life of honey is indefinite but sometimes crystallization may occur due to lack of moisture content in the honey, heating the honey will bring it back to its liquid form.

During the winter months the honey supers are removed and stored for the spring and the bees go on with business as usual, they do not hibernate. Sometimes the hives are winterized by wrapping them in tarpaper but in the metro Toronto area there is no need to do this as the cold temperatures do not often persist for long periods of time. When the spring rolls around, it is time to start all over again, the honey supers are put back, and before you know it, the bees start filling them with honey.

The most rewarding part of beekeeping is how much you can learn by doing it yourself. Starting out with a few pounds of bees and helping it grow to a strong healthy hive really gives you a great feeling of accomplishment. I hope this article gives you an appetite to start beekeeping at your course.

Good luck!

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Removal of frame for honey extraction



Frames are placed in spinner for honey extraction

Irrigation audits

by Pelino Scenna, Superintendent; and
Bill Martel, Assistant Superintendent
Burlington Golf and Country Club

Does your irrigation system work at its maximum efficiency? Are your sprinkler spacings correct? Are you over watering? These are all questions that can be answered through an irrigation audit.

We, at Burlington Golf and Country Club, had the opportunity to audit our irrigation system in early August. The audit was performed by Dennis McKernan of Life Works Design and Consulting Ltd. from Olds, Alberta. Dennis is a former golf course superintendent and has audited several courses in western Canada and the United States.

An irrigation audit consists of setting up test plots, physically inspecting the sprinklers and nozzles, measuring sprinkler spacings and operating pressures, and collecting irrigation water within the test plots. From these findings you can calculate your precipitation rate and, compared to the manufacturer's theoretical precipitation rates, measure the efficiency of the system. What you find may surprise you.

Typically, golf courses are over irrigated. Warmer, drier summers and lower water levels are forcing superintendents to become better managers of water. Dennis has helped numerous golf courses reduce their water consumption by as much as 30%. Our audit reassured us that our system was working well. A well tuned system, however, can still be improved and Dennis brought forth a number of points that has allowed us to reduce our daily water consumption and water more efficiently.

Golf courses are an easy target for the public and media to scrutinize. We must be able to justify our need for water and that we are using this resource as efficiently as possible. Golf course superintendents often boast about being environmentally sensitive and using best management practices; an irrigation audit will help you put your money where your mouth is.



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- Overview of Auditing Process
- Calculating of water consumption savings
- Cost Projections/Benefit analysis
- Performing site analysis/Audit procedures
- Determining System Efficiencies
- Calculating ET demands and System Delivery
- Developing /Modifying a Base Schedule

Speaker: Mr. Dennis McKernan

Mr. McKernan is the author of *The Great Plains Turfgrass Manual* which is now in its third edition. He has been a golf course Superintendent (Lethbridge Country Club) and currently offers consulting services through Life Works Design and Consulting Ltd. He is a certified Landscape Irrigation Auditor with experience in auditing golf courses, parks and commercial irrigation systems. Mr. McKernan teaches Irrigation and Turfgrass Management at Olds College. He has taught there for 12 years and in 1995 was awarded an International Teaching Award. To reserve a spot call (905) 602-8873 or (800) 387-1056



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Fair weather for field day

The annual Summer Research Field Day was held at the Guelph Turfgrass Institute under sunny skies and perfect temperatures on the last day of August. This annual event has become a popular summer professional development opportunity for golf course superintendents and other professional turf managers and their staff.

The day opened with the swirl of the bagpipes as the University of Guelph piper Donald Hamilton led the several hundred attendees down the hill from the G.M. Frost Centre to the new research green (for more information about the green, see the August issue of *Green is Beautiful*). GTI Director Rob Witherspoon welcomed everyone and read the roll call of contributors to the construction of the new green. Most were in attendance for the dedication. The green was officially dedicated by Ted Tom, President of the Ontario Turfgrass Research Foundation, Jim Wheeler, Assistant Deputy Minister of the Ontario Ministry of Agriculture, Food & Rural Affairs and Dr. Rob McLaughlin, Dean of the Ontario Agricultural College at the University of Guelph. Each of the men said a few words on behalf of their organization. Rather than the traditional ribbon cutting ceremony, golf balls were chipped onto the green.

After the dedication, the assembly broke into ten groups to tour the various stops on the tour of the research plots. Stops that were of specific interest to golf course superintendents included the

bentgrass and wetting agent trials, a variety of pathology research projects and the new OTRF funded divot repair research project. Participants had the first public opportunity to view actual plants coming out of the bentgrass and ryegrass breeding programs. Alissa Devereaux, a graduate student working with Dr. Steve Bowley, had samples of the plants that contain a stress tolerant gene as well as a poster illustrating the process of gene transfer to increase stress tolerance of bentgrass and ryegrass. Other stops on the tour included the NTEP variety trials, environmental research and an opportunity to discuss GTI maintenance practices with Research Superintendent Norman McCollum. Ted Tom, Thom Charters and Nigel Rennie of the OTRF ran a putting contest on the new green which raised almost three hundred dollars for turfgrass research.

After a BBQ lunch at the Frost Centre, the optional afternoon workshops were held. Once again, several of the workshops were completely sold-out with Dr. Jack Eggens' *Problem Solving*, Dr. Tom Hsiang's *Disease Diagnosis* and Pam Charbonneau's *Insect Management* workshops drawing

large crowds. Hands-on workshops also included an opportunity to work with Dr. Gary Parkin using a variety of methods to measure the moisture content of putting green rootzones and visiting faculty Dr. Daryl McCartney from the University of Manitoba who lead an entertaining workshop on composting landscape wastes.

Participants provided feedback through an evaluation form. Winner of the evaluation draw was Cam Edgar of London, Ontario. He wins a copy of *Diseases and Insects of Turfgrass in Ontario*. Based on the feedback of participants, a few changes have already been made for the 2000 Research Field Day. The main change is that the date will be moved to the third Tuesday of August each year. The faculty and staff would like to thank everyone who attended this year. We look forward to seeing you out at the GTI on August 15, 2000.



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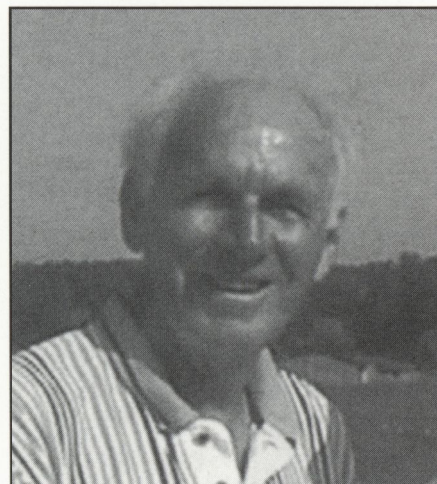
Gord Witteveen's retirement day

by Cory Janzen, Superintendent
Board of Trade Country Club

It is unusual for a person to choose their retirement date, organize their own party, and be able to select their closest friends to celebrate the day. Gord Witteveen, however, was never defined as a typical Golf Course Superintendent during his 28 seasons at the Board of Trade Country Club. On Monday, July 26, 1999, Gord hosted over 100 of his closest friends at a very enjoyable golf event on the East Course at the Board of Trade. His guests included many colleagues, friends, family and Board of Trade members. In typical Witteveen fashion, the event went off without a hitch. With the sun shining and the golf course nicely manicured, many of Gord's friends had a chance to meet and discuss their best Gord Witteveen stories from years gone by.

The Golf was a team event, with the winners receiving generous prizes donated by many of the participants. Perhaps the most exciting moment was when Gord's son Sid made a hole in one on the par three 14th hole. A small committee of Paul White, Nigel Rennie, Marie Thorne, and Cory Janzen helped organize the event.

Following a wonderful dinner, there were many stories about Gordon from the past and present. Many of his former Assistants had the opportunity to speak about their time at the Board of Trade and the impact that Gordon has made on their careers. Each one talked about dedication, professionalism, responsibility, and hard work as important lessons learned during their time working for Gordon. In total, there have been over twenty Assistants, or



Gord Witteveen

Foreman who have assumed Superintendent positions throughout Canada after working for Gordon. A partial list of these includes Ken Wright, Al Schwemler, Natalie Amos-

continued on page 17

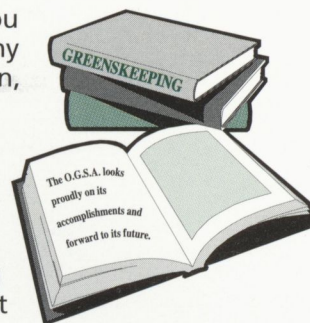
BULLETIN UPDATE

GREENKEEPING IN ONTARIO AND THE HISTORY OF THE ONTARIO GOLF SUPERINTENDENTS' ASSOCIATION

With summer officially over, and a little bit more time to spare, you might dig into your old records and photos to see if you have any contributions toward our 75th commemorative publication, *A CENTURY OF GREENKEEPING A Story of the Unsung Heroes*. Maybe there is an old picture in your clubhouse that has significance, or perhaps you recall an anecdote. We encourage your input and look forward to hearing from you.

Gord Witteveen, our in house author of this publication is still hard at it. He reports that he is finding some very interesting information together with some very old advertisements amongst the dusty archives.

It seems that in 1918 Rosedale kept 100 shorn lambs in a pen on the course, except between the hours of four o'clock in the morning and mid-day, when they were allowed to play over the course as much as they like. Apparently, unlike cattle, they do not injure the turf, in fact, they not only keep down the growth of grass, but in other ways improve the fertility of the soil.



TEAMWORK

TOGETHER WE CAN ACHIEVE THE EXTRAORDINARY

Stok, Rob Ackermann, Keith Bartlett, and Cory Janzen who has succeeded Gord at the Board of Trade. Each of us owe Gord a deep debt of gratitude for his dedication and commitment to teaching and challenging ourselves to succeed in a very competitive business. The many comments passed along by members and friends show how much Gord will be missed at the Board of Trade. He won't be too far away though, since Director of Club Operations Grant Humes presented Gord with a lifetime golf membership in recognition of his 28 years of service at the Board.

Gord was a great Superintendent at the Board of Trade, and many of his innovations and ideas have contributed greatly to the science of Turf Management. However, he will not be sitting around watching time pass him by. He is very busy with the 9 hole golf course that he owns in Brantford, which is a real treat to play. He will also be touring the world with his popular seminar, "The

Magic of Greenkeeping" and authoring a book for the 75th Anniversary of the OGSA. It seems that Gord had to retire in order to complete his many other obligations. In closing, we wish Gord many happy and healthy years to come and know that he is always just a phone call away for a game of golf or some advice.

Thanks Gord

A Word from Gord

After 44 years in charge of 4 different golf courses: 1956-57: Noranda Mines GC; 1958-60 London Highland; 1961-72 Northwood GC, Downsview; 1973-99 Board of Trade, my recent retirement party at the Board of Trade was a wonderful culmination to an exciting career of greenkeeping. I want to warmly thank all those who attended and especially those who helped organize the event. I didn't know I had so many friends.

Thanks

Gord Witteveen

\$1,000⁰⁰ Turfgrass scholarship award

The O.G.S.A. has developed this scholarship programme to recognize scholastic accomplishments and potential leadership in the field of turfgrass management. We feel that education is a large part of our responsibility to the Golf Management Industry. Our 1999 policy dictates that we will provide one Scholarship in the amount of \$1,000.00 based on academic accomplishments and the content of the application.


Students who are Ontario residents and have a career goal of being employed in the golfing industry are eligible to apply. Students must have at least one year of post secondary education in Turfgrass Management, and an average of at least 80% in order to apply.

We want to honour the student who has proven their scholastic achievement in their selected field. Although, this now excludes first year students from receiving this award during their first year, it does give them something to strive towards, which is the purpose of the scholarship.

It is mandatory this year, the students send their transcripts along with their application.

Application information has been sent out to Colleges and Universities that offer turfgrass management diplomas and degrees. We have asked them to post this information for all interested students. The application and related information must be in the O.G.S.A. office by November 30, 1999. If you know of anyone who might benefit from this scholarship, please pass this information along to them. Further details can be obtained from the O.G.S.A. office.





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Prep-work to avoid ice damage

by Jim Moore, Superintendent
Puslinch Lakes Golf Club

It's 1999 and El Niño passed leaving fond memories of golfing in December, but Mother Nature has said "enough is enough" with a vengeance. She dumps a load of snow on us in early January which, closed major airports and caused havoc with driving, especially in the GTA.

A week after the storm, the Club Manager called me to ask if we should start worrying about ice build-up on the greens. It has been our past experience that ice damage leaves us with a deadly outcome. The last ice damage was 10 or more years ago. Ever since that time, we have prepared for the worst. Tarps may work, however, under the circumstances, at Puslinch Lake Golf Course, the maintenance staff is seasonally employed. We have tried tarps on one green and the results were not favourable. This was because no staff was on-board to lift the tarp during a warm spell in March, to let the turf cool down and then replace the tarp when the temperature dropped.

We experienced the same damage as if the green was covered in ice! In past years when there has been a large accumulation of snow, I would go out on the golf course with a four-wheel drive tractor fitted with snow chains after the weather reached temperatures above freezing.

If the ground was still frozen, I would wait. Usually a mid-winter thaw will only last about a week. Shortly thereafter, I check the greens for ice. Past years have shown different lengths of mid-winter thaws, but the depth of the snow will tell how thick the ice will be after the first melt. If you see a thick crusty snow on the greens after the melt, there is a good chance that there is a small layer of ice on the greens. The time is now to remove the snow so the ice does not get any thicker. If you let the ice build up, your ninety days will run out before March weather softens the ice so that it can be cracked (60 to 90 days is a very accurate time frame before your greens die from ice damage).

Blowing or plowing off the snow from the greens helps stop the ice building up to a point where it is too thick to break. If there is clear ice exposed, use milorganite or crumb rubber to cover it up. If the forecast is calling for another thaw (or when the temperature is going above freezing) start removing the snow before it gets too heavy and melts into another layer of ice.

Keep track of the time and if it is past the 60 days of ice build-up, it is time to remove the ice. If you have been removing the snow, there should be only a very thin layer of ice. Using 50 lbs. of milorganite or crumb rubber per 5000 square feet on a sunny day, will attract heat to melt the ice, and it should be gone in a couple of days. The crumb rubber can be swept up or picked up with the greens mower in the spring and spread over high traffic areas to help reduce compaction.

continued on page 19



Puslinch Lake, March 15, 1999, 7th Green – ice three inches thick.



Puslinch Lake, March 15, 1999, 3rd Green – ice damage in center of green, the rest has winter dessication.

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By keeping the thatch layer thin with a fall verticutting as well as having good drainage there should be no problem. If the ice sticks around for more than the appropriate time, there may be some problems. Some scarring might occur from the heavy machinery, but if the green has suffered from past problems, a pie plate size divot is easier to repair than having to re-sod a 5000 sq. ft. green.

This year at Puslinch Lake Golf Course, we suffered a small amount of ice damage on one green. We had reached the limit of 60 days on this ice patch. I had been letting the turf grow a little longer on this green because we had planned on lifting the turf to install drainage tiles. The longer turf created gases which helped kill off the turf.

I hope by sharing my good and bad experiences will help you prevent problems which, may occur from ice buildup.

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Class "D"	Golf Course Owner / Managers
Class "E"	Industry Associates

Any Class A member who attests for any two (2) new member applicants between October 1st and December 1st will be eligible to receive an O.G.S.A. Merchandise Package valued at \$250.00!

Your name will be put into the draw to be held at our Annual General Meeting during the Ontario Turf Symposium on Wednesday, January 5th, 2000.

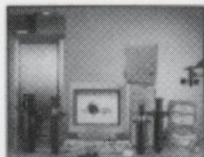
REMEMBER

Any applicant approved as an O.G.S.A. member qualifies for a membership discount when registering for the January 2000 Turfgrass Symposium. In addition, if you register prior to November 19th you will appreciate an additional Early Bird discount.

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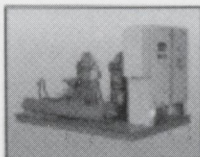
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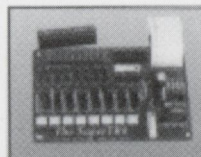
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by Hunter



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by Don Crymble

Keeper of the Markham Green Golf Club

I have been the superintendent at Markham Green Golf Club (previously I.B.M. Country Club) for over 10 years, and in that time, many things have changed. Ten years ago the club consisted of an 18 hole championship course, a nine hole executive course, soccer field, base ball diamond, bowling green, archery course, tennis courts, driving range, garden plots and a play house for child care for members on the property. We also hosted annual events such as a Christmas party for over 5,000 children, a summer picnic for over 8,000, and other social activities. The property was over 320 acres. We mowed all areas at least weekly, drove equipment through the river, sprayed at the first sign of pests, and operators complained about mowing over toads. We also installed 4 foot high wooden dam structures in the river to create ponds for purely aesthetic reasons. Besides maintaining excellent playing conditions, minimal effort was expended on other property management functions.

Markham Green is now a 9 hole golf course situated completely in the Rouge Valley. Our goal is to be one of the top ten 9 hole courses in Canada. We no longer mow every thing. Sensitive areas are not mown, each year the buffer zones are enlarged 6-12 inches and will be moved

out until a suitable buffer is obtained. We are actively discouraging entry into the river. We spray only when and where necessary. Environmental concerns are near the top of our priority list.

We have stopped mowing certain areas in order to provide a buffer from the community, a buffer along our water way, to improve the design and aesthetics of the club and to provide an improved wild life habitat. We now monitor our naturalized areas and remove unwanted material such as ragweed. In the future, we may remove unwanted non indigenous plants such as Norway maple. We have begun to inter plant some buffer zones with indigenous plant material. The continuation of the club may rely on proof that the course is actually a benefit to the environment. Could you imagine any other industry (General Motors as an example only)



being required to prove that one of it's factories actually promotes a habitat for wild life?

In the spring of 1999 we overseeded a wild flower mix into a few of the areas to be naturalized. One area caught very well and in the summer of 1999, six members who had said no more than "hello" to me in ten years, sought me out to ask about our new wild flowers. I had thought that I had done more or better things in 10 years, but, obviously I had not.

My goal is to know something about all life forms on the property. I estimate that there are 1000 plant and vertebrate species, no idea of number of insect, invertebrates and micro-organisms. I plan to know a lot about 6-10 species. I may choose American toad, Northern Leopard frog, White trillium, River Bank grape, Little Brown Myotis bat and the unidentified species of turtle that I see all of the time.

Many superintendents already make many daily observations concerning the wild life on their property. During busy times we already tour the property daily checking the grass, the trees, the shrubs; why not check that important species on your property? I'm sure that you have seen birds, perhaps red winged Blackbirds and Swallows, foraging on a fairway while your equipment mows. Then, another bird species enters the area and all the foraging birds leave. We should know and document the appearance of that intruding bird.

Little additional effort would be required to record and share this. Each

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continued on page 22

continued from page 18

course could specialize in a few species. Then, share this information weekly depending on the life cycle of species. Most institutions don't have the resources to do this type of detailed field work, the information would be invaluable. Knowing and posting important times in critical species' life cycles would give your little "environmentally protected area" signs more influence.

In two years, my goal is to know the life cycle and food chain of my 6-10 species. If even some courses did this we would possess so much knowledge that many groups and organizations would be coming to us begging for our help, which we

would be pleased to provide. Besides being the right thing to do, my motive is purely selfish. The long term viability of my course may rely on proof that the property which I manage benefits more than just the golfing public. Any group could come forward and want to naturalize the complete property. If I can show that it is already a biologically diverse naturalized area, then I have a better chance of survival.

How else could a property be more intensely used than as a golf course putting through over 35,000 rounds, while benefitting many indigenous species and still turning a profit? Within a few years most every one will be on line. If your club can book a tee off time, you

have the hardware and probably the software to be on line. Thirty to sixty minutes a week to share information on a regular basis on a secured web site controlled by Superintendents will pay back enormously.

We in the "green" industry have more than a working knowledge of physics, chemistry, botany, mathematics and all other physical and human sciences. By the new millennium, January 1, 2001, my goal is to be well on my way to knowing all organisms and events which occur on, over and below the green space which I manage.

Growth is not linear but in fact exponential, knowledge is growth... knowledge is power.



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TORO

Looking back

Ten years ago today

by Barry Endicott,
Nobleton Lakes Golf Club

The Board of Directors in 1989 were **Neil Acton** (president), **Deer Creek**, **Gord Nimmo** (vice), **Sarnia**, **Thom Charters** (past), **Weston**, **Rhod Trainor** (editor), **St. Thomas**, **Greg O'Heron**, **Peterborough**, **Ted Ellis**, **Greenwood**, **Bruce Burger**, **Galt**, **John Taylor**, **Twenty Valley**, **Scott Dodson**, **Summit**, **Ed Farnsworth**, **Deerhurst**, **Mark Hagen**, **Wyldeewood** and **David Gourlay Jr.**, **Beacon Hall**. **Cindi Charters** was the office secretary.

Neil Acton left Brooklea and took the position at Deer Creek, while **Marlon Gieseler**, Neil's assistant, took over Brooklea. **Richard Ziegel** left Burlington Springs and went to Deerfield. **Ted Ellis** left Greenwood and went to Blue Springs, **Mark Hagen** moved from Wyldeewood to West Haven. **Mike Creed** took Mark's position at Wyldeewood. **Gary Hastings** moved to Rockway and Doon Valley from Merryhill. **Jerry Richard**, assistant at Toronto G.C., started at Craigowan. **John Anderson** moved to Hockley Valley and **Don Crymble** replaced John at IBM. **Bruce Dodson** left Emerald Hills to become superintendent at Hawkrige and **Jack Austin**, formerly of Turf Care Irrigation, went out on his own forming Canadian Irrigation Consultants. **Mark Schneider** went to Beachgrove, **Ryan Beauchamp**, assistant at St. Thomas, went to Westminster Trails, **John Cherry** left Cherry Downs for the National while **Ken Wright** left the National and went to Devil's Pulpit. **David Gourlay Jr.** left Beacon Hall and

started at a new course in Ottawa called Eagle Creek. **Bob Heron** took over from Dave at Beacon Hall. Golf course architect **C. E. (Robbie) Robinson** passed away on December 29 at the age of 82.

New members: **Vince Dermott**, **Markland Woods** (B), **George Allison**, **Western Trent** (B), **David Brooke**, **Scotch Settlement** (B), **Nancy Pierce**, **Toronto Golf** (F), **Jack Little**, **Dalewood** (F), **Ian Bowen**, **Lakeview** (B), **Mary Beth Kelly**, **Ladies** (F), **Doug Walsh**, **Westmount** (F), **Rob Sharp**, **Glenn Abbey** (F), **Bill Dickinson**, **Champion Turf Equipment** (E), **Stephen Jones**, **Deer Creek** (B), **James Hopkins**, **Fawn Brook** (B), **Raymond Yule**, **Glen Cedars** (B), **Jay Kulak**, **Port Colborne** (B), **Peter Dickey**, **Glenway** (B), **Robert MacGrandles**, **Ridge Pine Park** (B), **Jack Austin**, **Canadian Irrigation Consultants** (E), **Everett Nieuwkoop**, **Ontario Seed Co.** (E), **Dan O'Conner**, **Saugeen** (F), **Steven Holmes**, **Donalda** (F), **Greg Anderson**, **Victoria Park** (F), **Alex McLeod**, **Monterra** (F), **Terry Fries**, **Merry Hill** (F), **Paul Scenna Jr.**, **Mississauga** (F), **David Tascone**, **Wyldeewood** (F), **Jordon Lucas**, **Galt** (F), **Ron Legato**, **Scenic Woods** (A) and **Perry Beausoleil** (F) **Carleton**.

The Georgian Bay area was seeing an influx of new courses. **Ron Heesen**, at Monterra, was preparing for a July 1st opening. **Tom McBroom** was working on the Hockley Valley Golf Club with Superintendent **John Anderson**. **Bob Cupp** was building the Deerhurst Highlands Golf Club adding to **Ed Farnsworth's** established 18. **Rene and Charlie Muylaert** were building a second 18 holes for **John Hughes** at Horse-shoe Valley and a new 18 hole course in Orillia, called Hawkrige, where **Bruce Dodson** is superintendent.

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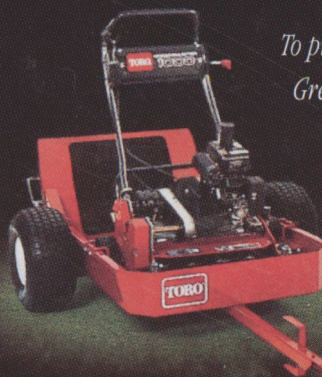
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