GREEN CLIPPINGS

BY JOHN HARRIS, CO-EDITOR

The 1990 MGCSA Championship will be held at Hazeltine National Golf Club August 13. Superintendents will play in the Championship flight. A first flight and a second flight, if necessary, along with a Senior flight will be played. The second flight will be open to all others or members without handicaps. The Calloway system will be used for determining the winner. All Championship players will play together.

Congratulations to Steve Garske, winner of the 1990 Turf Tourney. Steve also donated his winnings back to research. His generosity is greatly appreciated.

Congratulations to Bill Johnson and his team members, green chairman John Harris, general manager Dale Miller and pro Marty Lass from Edina C.C. on their 1st place win at this year's John Deere Tourney. Bill and his guests will travel to PGA West in La Quinta, Calif. for the national tournament to be held in mid-November.

Nominations for the Distinguished Service Award are being accepted. If you know of anyone that merits a nomination, contact Kerry Glader CGCS, St. Cloud Country Club.

The new Environmental Committee has been formed by Kevin Clunis. Its members are Jim Gardner, Paul Mayes, Shane Andrews, Scott Austin and Dave Krupp, advisory. They will begin work on an information packet for members on laws and regulations.

Construction has begun at River Oaks Golf Club in Cottage Grove. At this rate golf course acreage is going to surpass the mosquito population.

Do Your Trees Have Galls?

By Jeffrey D. Hahn
Assistant Extension Entomologist
Minnesota Extension Service

Odd looking growths on trees often give the impression that trees are stricken with a disease. These deformities, known as galls, are really caused by insects.

Galls result when insects feed on new plant tissue in the spring. Insect saliva stimulates the otherwise normal plant cells to deform as they grow. These abnormal cells multiply and surround the insect, creating a safe haven where it lives during the summer.

Virtually all plants have galls, but we see them most often on maples, oaks, ash, hackberry, roses and spruce. Some of the common galls we encounter in Minnesota are maple velvet gall, jumping oak gall, ash flower gall, hackberry blister gall and cooly spruce gall.

Healthy, mature trees are not normally weakened or stressed by galls and control is applied to protect plants' appearence. Once galls are seen, it is too late for control during that season.

If a very young tree or an evergreen is heavily infested, control is justified for next year. Healthy, mature trees that suffer through several consecutive years of heavy gall formation should also be treated.

The best time to spray your tree varies with the specific gall. If it is desirable to treat your tree or shrub next year, identify the gall for the best time to spray in the spring.

Anthracnose Abundant Following Wet Weather

By Cynthia Ash
Assistant Extension Plant Pathologist
Minnesota Extension Service

Anthracnose is a fungal disease which infects ash, maple, sycamore, walnut, burl and white oak.

Prolonged cool, wet weather this spring has resulted in abundant leaf spot and defoliation. Symptoms are first evident on the new growth as it emerges. Purple to brown spots the diameter of a pencil lead appear and expand rapidly to blight the entire leaf. Infected leaves are quickly shed by the tree, causing the owner to become alarmed. Persistent cool wet conditions may cause dieback of the new growth in ash, oak, sycamore and walnut.

If anthracnose is present for several seasons, it can weaken a healthy tree, making it vulnerable to attack by insects and diseases. Defoliation by anthracnose in an already weakened tree can result in decreased vigor and decline. Generally, fungicides are not necessary. Benomyl (Benlate) is labeled for preventive application to shade trees. Preventive means it must be applied before the fungal infection occurs and reapplied on a regular basis through the cool, wet weather season.

The vigor of the tree can be maintained by proper watering during dry periods. Fertilizer should be applied to soils deficient in plant nutrients. Removal of fallen leaves and dead branches may limit the spread of the disease, especially on isolated trees.

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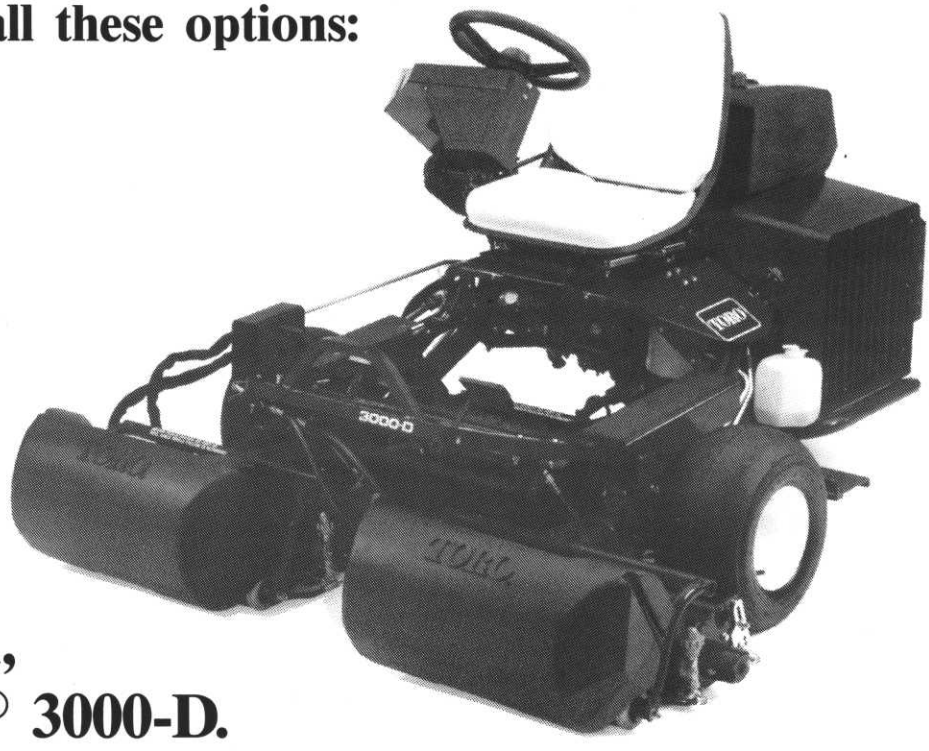

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New Herbicide Research On Shrub Roses

By Jim Calkins and Bert Swanson

Interest in and the demand for shrub roses have increased over the last few years. Breeding and selection programs have resulted in the introduction of many new, cold hardy, cultivars with promising landscape characteristics. Since shrub roses have not normally been incorporated into nursery production systems or used heavily in the landscape, increased production and use of shrub roses poses potential maintenance problems both in the nursery and the landscape. Weed control during production and in landscape plantings will certainly be one of these concerns. Since herbicides are often quite species specific, many questions arise regarding the susceptibility of roses to herbicide injury. To obtain this information, research to determine the herbicide tolerance of hardy shrub roses was initiated in spring 1988.

Materials and Methods

Rooted cuttings of the following rose cultivars were treated with 20 different pre-emergent herbicides or herbicide combinations and two post-emergent herbicides: Hansa, Orange Sunblaze, Scarlet Meidiland, Carefree Beauty, Nearly Wild and Adelaide Hoodless. Plants were divided into two groups and herbicides were applied to one group prior to bud-break and to the other group after they were in full leaf (post bud-break). There were five replications of each rose cultivar per treatment.

Weed count and phytotoxicity data were collected during the 1988 and 1989 growing seasons. The roses were protected during the winter of 1988/1989 with a covering of clear plastic/straw/clear plastic and there were no losses from winter injury. As growth resumed in the spring of 1989, the plants were pruned back to 6-8″ in height.

From the time of planting the cultivar, Orange Sunblaze performed very poorly and for this reason was dropped from the study. The poor performance was attributed to the planting stock being in poor condition.

Results and Discussion

Although the results were somewhat mixed, in 1988, herbicide injury was generally greater for the post bud-break herbicide application than for the pre bud-break application. In cases where injury was greater for the pre bud-break application, it appears the injury was more the result of poor weed control and thus reduced growth caused by weed competition, than phytotoxicity. Slightly greater phytotoxicity levels were observed in 1988 for the following herbicide/cultivar combinations: 1) XL 2G - Carefree Beauty; 2) Goal 1.6EC - Hansa, Carefree Beauty and Nearly Wild; 3) Rydex 50WP - Carefree Beauty and Nearly Wild; 4) Mowdown - Carefree Beauty. Apparently, the rose cultivars Carefree Beauty and Nearly Wild are more herbicide-sensitive than the other cultivars tested.

Weed control for all herbicides tested in 1988 was improved compared to the control. In 1988, the best control of both broadleaves and grasses was obtained with Rydex 50WP (4.0 lbs. AIA), Mowdown 4F – Devrinol 50WP (5/6 lbs. AIA), Ronstar 50WP (3.5 lbs. AIA), Ronstar 50WP (2.0 lbs. AIA), and Rout GS (2/1 lbs. AIA) respectively. Although weed control was good, Rydex 50WP caused an unacceptable amount of injury. Goal 1.6EC (1.0 lb. AIA), Rout GS (2/1 lb. AIA), Mowdown 4F (5.0 lbs. AIA), Snapshot 80DF (3.0 lbs. AIA), and Gallery 75WP (0.75 lbs. AIA) provided good grass control, but fair to poor broadleaf control in 1988. Pennant 5G (4.0 lbs. AIA) provided good grass control and poor broadleaf control in 1988. Devrinol 50WP (6.0 lbs. AIA) provided the poorest weed control in 1988.

In general, herbicide phototoxicity observed in 1989 was less than that observed in 1988.

This may have been caused by the hot, dry conditions that prevailed in 1988. As in 1988, Carefree Beauty and Nearly Wild were more sensitive to herbicide injury than the other cultivars tested. The most phytotoxic herbicide in 1989 was Prowl 4EC (4.0 lbs. AIA),

In 1989, all herbicide treatments again significantly reduced weed numbers compared to the control.

Ronstar 50WP (3.5 lbs. AIA), Ronstar 2% + Devrinoll 3% (2/3 lbs. AIA), Snapshot 80DF (3.0 lbs. AIA), OH II (2.0 lbs. AIA), Ronstar 50WP (2.0 lbs. AIA), Goal 1.6EC (1.0 lb. AIA), Gallery 75DF (0.75 lbs. AIA), Mowdown 4F (5.0 lbs. AIA), and Mowdown 4F + Devrinol 50WP (5/6 lbs. AIA) gave excellent to good control of both broadleaves and grasses. Surflan 4AS (3.0 lbs. AIA), Pennant 5G (4.0 lbs. AIA), and XL 2G (3.0 lbs. AIA) provided good grass control but poor control of broadleaf weeds. Although they have generally been quite effective in the past, Rout GS (2.1 lb. AIA) and Ronstar 2G (3.5 lbs. AIA) gave excellent broadleaf control, but only fair control of grasses in 1989. Prowl 4EC (4.0 lbs. AIA) gave the poorest weed control in 1989.

With the exception of the cultivar Orange Sunblaze, growth of the shrub roses tested under container growing conditions was excellent. In 1989, the cultivars Scarlet Meidiland and Carefree Beauty were somewhat defoliated and Adelaide Hoodless was nearly completely defoliated by leaf spot diseases. No defoliation was observed in 1988. There was also a problem with cane borers on the cultivar Hansa in 1989 which was not observed in 1988.

Based on this research it appears that shrub roses are generally quite herbicide tolerant. Better weed control is achieved with pre bud-break herbicide application. This probably results from better herbicide coverage. Based on two years of data, when compared for weed control and phytototoxity, the best herbicides for pre bud-break use on shrub roses are Ronstar 50WP (3.5 lbs. AIA), OH II (3.0 lbs. AIA), Goal 1.6EC (1.0 lb. AIA), and Rout GS (2/1 lbs. AIA).

The best herbicides for post bud-break use on shrub roses are Ronstar 50WP (3.5 lbs. AIA) and Rout GS (2/1 lbs. AIA). Extreme care must be taken to see that the herbicides are irrigated in immediately following application to wash the herbicides off the plants, or increased injury may result.

The mixed results for efficacy and phytotoxicity observed during this study highlights the importance of continued study of the effectiveness of herbicides over many years. Differences in climate from year to year can have drastic effects on herbicide effectiveness and phytotoxicity.

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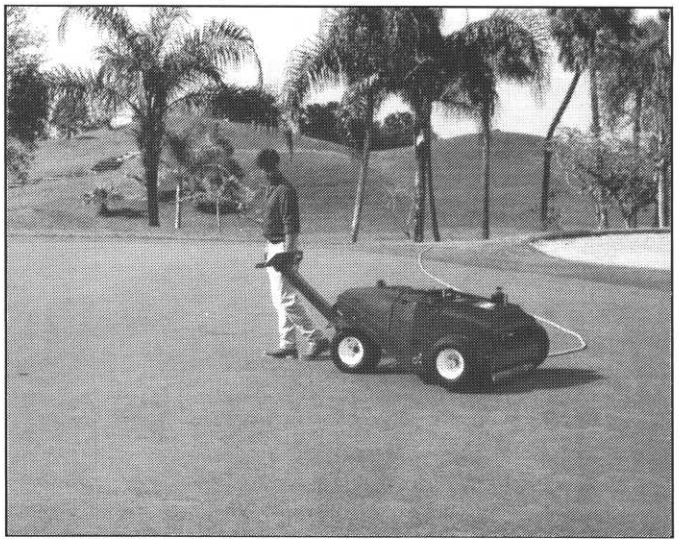

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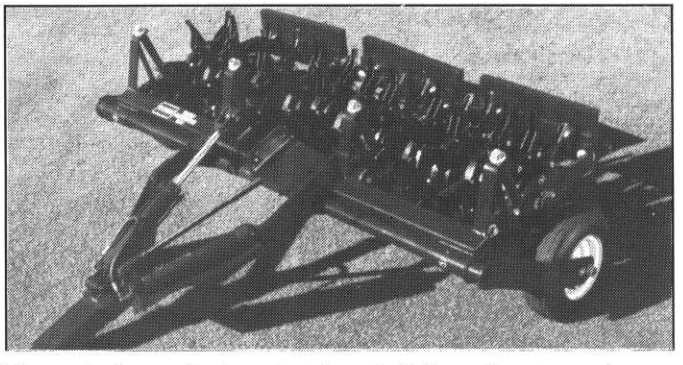

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Take Steps to Avoid Deer Ticks

By Jeffrey D. Hahn
Assistant Extension Entomologist
Minnesota Extension Service

People may shy away from outside activities because of deer ticks and Lyme disease. By observing some common sense guidelines, the outdoors can still be enjoyed with a reduced risk of encountering deer ticks.

The easiest way to avoid this tick is to stay away from places where they are known to be a problem. The deer tick is found primarily in hardwood forests and adjacent grasslands and is most common in the central and east areas of Minnesota.

If this is not possible, wear protective clothing, such as long-sleeved shirts and pants. Pants tucked into socks provide additional protection. Wear light-colored clothing so ticks are easier to spot. Walk in the middle of the trail and avoid grassy areas nearby.

Apply repellents to your clothing to discourage ticks. Products that contain DEET work well. A new repellent known as Permanone, containing permethrin, is even more effective, killing the ticks on contact as well as repelling them. Permanone may be difficult to find.

Periodical inspection for ticks on all parts of the body is important. Deer tick nymphs, the most prevalent stage during the summer, are very small and can be easily overlooked.

If an attached tick is found, carefully remove it with tweezers by grasping it around the head as close to the skin as possible and gently, yet firmly, pulling it out. Home remedies such as covering the tick with vaseline or touching it with a lit match do not work, and these uses are discouraged.

Save any ticks that are found biting to be identified by an expert. Different stages of wood ticks and other ticks are present and can be confused with the deer tick, making identification difficult.

Knowledge and awareness is the single most important protection against deer ticks and Lyme disease. Know what to look for and expect, and you can still enjoy the great outdoors.

GCSAA Gives $35,000 for Research

The Golf Course Superintendents Association of America (GCSAA) presented a record $35,000 contribution to the joint USGA/GCSAA Turfgrass Research Committee to support research into turfgrass breeding and environmental considerations during the 1990 U.S. Open.

"We certainly appreciate the support that GCSAA has shown us—not just the financial support, but also the moral support that golf course superintendents have given us," said Dr. Mike Kenna, USGA research director.

Last year GCSAA—through its Scholarship & Research Fund—donated $25,000 to the committee for general support of turfgrass research and an additional $25,000 earmarked to fund a full review of all scientific literature on the environmental impact of golf course management practices.

Results of the review are now serving as the starting point in the development of a comprehensive manual of best management practices. GCSAA's 1990 contribution will go into the committee's general fund and will support research that results from the review's findings.

According to Kenna, even though many superintendents already consider the environmental consequences of their management practices, the manual will provide needed documentation of environmentally responsible pest control. "I feel confident that we're in good shape to meet the challenges not only of the '90s, but of the next century as well, especially in the area of water use," Kenna said.

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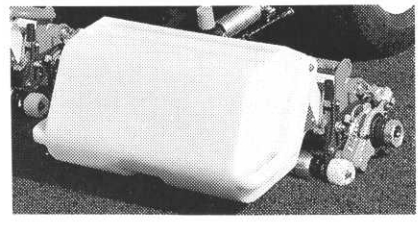

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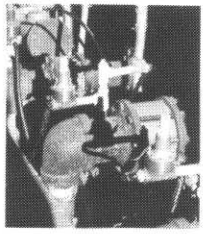
"We estimated that if Midland Hills had the program in 1987, we would have saved $7,200."

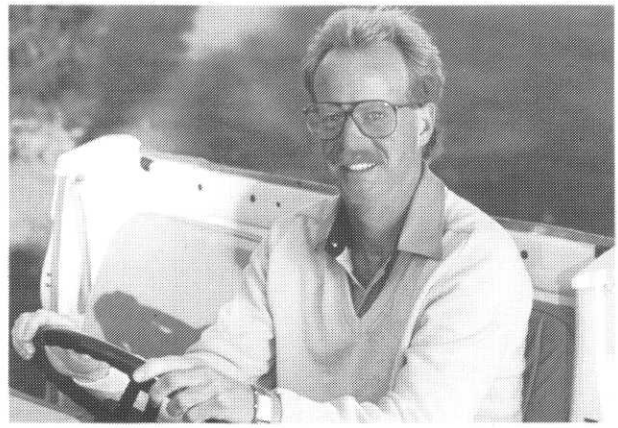


Golfers looking down the barrel of the fairway on the seventh hole of Midland Hills Country Club golf course see a picturesque little pond backing a putting green. "Now there's a good lookin' hole," many of them joke. Here's the challenge: Do you play it safe with a lesser iron? Or do you go right for the pin and risk sailing over the green and raising the level of that pond with your golf ball — just another dimpled ice cube to supplement the drink.

Scott Austin assures us that no matter how many golf balls hit the pond, it will never overflow and dampen any nearby basements in Falcon Heights.

"The Department of Natural Resources requires Midland Hills to maintain the current level of the pond. At night we pump water out to irrigate the course, and during the day we pump it back in from a 230-foot well. We keep the pond's level pretty constant."

Austin has worked at Midland Hills for four years, the past two as golf course superintendent. He has a degree from Penn State in turf-grass management and has worked at various clubs — including Hazeltine, of U.S. Open fame — for 17 years. "I've been golfing since I was 8 years old. I used to play every day in high school and I wanted to be a club pro. I got into maintenance instead."



Water pumps, above left, the lifeline of the golf course, pump about 1,300 gallons per minute to maintain Midland Hills' plush greens and fairways. Scott Austin, golf course superintendent, above, tends the course and supervises his summer crew, which includes up to 25 college and high school students.

But Austin still keeps the rhythm in his swing. An eight-iron rests against the passenger seat of the cart he uses to tour Midland as he supervises his crew. "I take a few practice swings when I'm changing the cups early in the morning," he says.

Midland Hills is a private country club nestled in a wooded lot not far from the University of Minnesota-St. Paul campus. It was founded nearly 60 years ago and has about 325 golfing members. The hills in the course's name are not mere wishful thinking. This course rolls, climbs and dips like a state fair ride. When you're not in the trees, you've got a sidehill lie. And when you don't have a sidehill lie, well, there's that pond.

The water hazard does more than haunt golfers. "It supplies a double-row irrigation system," says Austin. "There's a pipe running down both sides of each fairway. The sprinkler heads throw water into both the rough and the fairway.

"Three pumps pull water from the pond into the system. We use a 25- and a 40-horsepower pump to water the greens and tees, and a 60-horse for the fairways.

"It's all fully automatic," says Austin. "All I've got to do is put a pin in the control box here in the shop, and the course waters itself."

On any given summer day as much as 600,000 gallons of water are sprayed over Midland Hills. In the course of a year, that's more than 43 million gallons, enough to fill more than 1,100 Olympic-sized swimming pools. The energy bills to pump the water add up just as fast as the gallons.

In March of last year, Jim Absey, an NSP customer representative, called Austin. They discussed a limited off-peak electric rate. The rate allows a consumer to use energy only between the hours of 10 p.m. and 6:30 a.m. A clock on the meter automatically shuts off the power in the morning and kicks it back on at night. "It offers the customer a very attractive rate," says Absey. "There's no demand charge, which during the summer can amount to $8.13 per kilowatt of electricity."

Since there are few golfers foolish enough to compound their miseries by hacking away in the dark, it seemed to Austin that it was a perfect time to open those sprinklers full-throttle.

"Because of the rate's unique time constraints, not everyone can take advantage of it," says Absey. "Not everyone can have power shut off during daytime business hours. But this seemed like a perfect application."

"When I found out what sort of savings I could get," says Austin, "I signed on. We're reducing our costs nearly 65 percent with this rate. We estimated that if Midland Hills had the program in 1987, we would have saved $7,200."

Not bad, when you consider all those thirsty greens and fairways in the middle of last summer's drought. Golf courses were exempt from the watering ban, and Austin would occasionally have to supplement the nightly watering by using pumps hooked to other meters to irrigate greens and tees. "But," he says, "we didn't have to switch our watering cycle too much with the off-peak rate. We're not giving up a lot for the amount of savings we're receiving."

And if you're on the seventh tee and have chosen to hit for the flag, just remember: That pond doesn't give up much either. ♦

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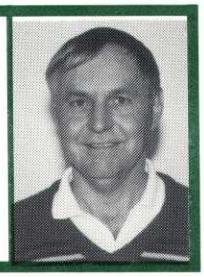
EDITOR'S CORNER

By Bill Johnson
Edina Country Club



Several superintendents had the opportunity to enjoy some competitive golf during the fourth annual Turf Tourney on June 15, and I hope even more are preparing for our annual MGCSA Championship August 13 at Hazeltine.

It's timely that we're holding the competition at Hazeltine, since this course is the site of the 1991 U.S. Open. Elsewhere in this issue you'll find an excellent story on how Superintendent Chris Hague and his staff are getting Hazeltine ready for this major tournament.

As you'll note, there's as much or more work outside of the gallery ropes as there is on the fairways, greens and bunkers. *(Turn to Page 5 for more details and photos.)*

Chris and his staff will be happy to chat about their big challenge, and they certainly should be prepared to give excellent responses to your questions. They're constantly being peppered with inquiries, and that interest should mount even more as the Open approaches.

In *Hole Notes*, we plan to give you an update next spring and a follow-up after the tournament.

* * * *

Congratulations to Kevin Huseth and his winning team in our fourth annual Turf Tourney in June. Playing at Dellwood Hills, they scored 99 points and won $100 each.

And hat's off, too, to Tom Fischer of Edinburgh USA, chairman of the competition, which netted about $5,300 for research.

You may be interested to know that two small advertisements in the Minneapolis and St. Paul sports sections and a well-placed news release the Sunday before the tournament sparked dozens of inquiries.

Tom reports that he had about 50 calls the following Monday and Tuesday, many from public course players who wanted to play one of the 19 private courses, which generously donated four tee times each. The last-minute flurry of activity helped considerably to generate more income, which will be used for research projects like the Baker Park leachate study.

* * * *

But back to our August 13 tournament at Hazeltine. Defending champion is Paul Mayes, who won last year at Edina Country Club.

Competition will get underway after lunch, and we'll have the awards ceremony that evening.

Remaining 1990 MGCSA Meeting Sites

Date	Site	Event
August 13	Hazeltine Nat'l. G.C.	MGCSA Championship
Sept. 24	Dellwood Hills G.C.	Stodola Scramble
October 8	Baker Park G.C.	