

The Americanization Of Lawn Bowling and Croquet

Peek through the hedges of a park in England or Scotland on a nice summer day and you'll see an orderly group of people decked out in their "whites" bowling or playing croquet. The turf on the greens appears as if it were scalped by a poorly adjusted mower. But you don't hear complaints from the players. All they care about is that the green is fast, smooth and dead level.

The British have taken these genteel sports with them around the globe to Australia, India, South Africa, and Canada. In these countries lawn bowling and croquet caught on with a passion with thousands of players spending many hours each week at the greens. Their acceptance in the United States has been limited, but that may be changing.

Lawn bowling and croquet have been restricted in this country to the affluent elderly or "leisure class" who have access to bentgrass or bermudagrass greens at private estates, country clubs, resorts or parks. Due to the cost of properly constructed and maintained greens, it's doubtful whether they will ever be sports for the masses. But, the barriers of class, wealth and age are beginning to fall. The potential exists to build thousands of greens at golf courses, parks, resorts and athletic clubs that currently have the expertise needed to build and maintain them.

Despite the recreational boom in the U.S., many potential players have overlooked these participant sports in which youth, sex or physical condition provide no advantage. Members of the American Lawn Bowls Association (ALBA) and the United States Croquet Association (USCA) believe that once lovers of the outdoors try their sport, they'll be hooked.

Jack Osborn, president of the USCA, says the number of serious U.S. participants in croquet has been multiplied by 50 in the last ten years. "Croquet is apparently fulfilling an important need heretofore unaddressed," claims Osborn. "Scores of folks, from college undergrads to retirement community residents, have discovered the social, recreational and competitive rewards of croquet. Clubs, resorts and hotels have recognized that croquet is a fresh answer for their members or guests seeking new outlets for participation beyond golf or tennis." These facilities are reaching out to enlarge their range of activities by adding croquet at a relatively low cost.

Osborn explains that the game is quite



A member of the U.S. Croquet Team concentrates during the Challenge Cup against England held at PGA National. The match was the highlight of the dedication of the USCA headquarters.

different from the version played by many Americans in their back yards as children. "The very look of the sport and that of the turf on which it is played has changed significantly." Larger balls now pass through increasingly narrow wickets set firmly into trimmer and faster greens. Gone are the short mallets, the old wooden balls and the wickets made of coathanger wire. Replacing them are handcrafted sets ranging in price from \$200 to \$1,200, a nice side line for any pro shop. But, it's the 84 by 105 foot, absolutely level, golf-quality greens that most clearly distinguish the back yard game from the sport.

Quality greens, sophisticated equipment, established rules, accepted handicaps and national tournaments governed by USCA have placed new emphasis on skill and competition. U.S. teams now compete as equals against teams from England, Scotland, Canada, Bermuda and South Africa. More than 250 clubs with 3,000 members look to USCA headquarters at PGA National in Palm Beach Gardens, FL, for assistance and support.

While USCA has begun to build American involvement in the sport of croquet, the American Lawn Bowls Association has



The Lakeland, FL, Parks Department provides three greens from Canada.

helped raise the standard of bowling in this country for more than 25 years. The game, developed in Scotland centuries ago, is vastly different from alley bowling, a popular sport played indoors in the U.S. There are no pins and the bowls (balls) are smaller and biased in shape, not round. The object is for a team to get the most bowls closest to the jack, a heavy white ball rolled down the rink to start the game.

"There is a considerable amount of strategy in bowling," explains Dr. Edgar Haley, M.D., a retired surgeon who is the leading expert on bowling green construction and maintenance in the U.S. and Canada. Teams consist of one to four bowlers. Each bowler has a definite role to play, from the initial roll of the jack (a white bowl that becomes the target) to using each bowl to get his team's bowls closest to the jack. "It's almost like playing chess on grass, anticipating the other team's next move and devising a strategy to stop it."

The odd-shaped bowls do not roll as predictably as a round croquet ball does. It takes a definite knack to control the roll of the bowl. Once a bowler develops this knack, he becomes intolerant to surprises caused by inconsistencies in a green. "A bowling green must be absolutely flat, fast and smooth," says Haley. "The better the green, the more challenging and enjoyable the sport is. Greens have improved greatly during the past 15 years. As a result more people are taking the sport seriously."

The most important fact about bowling and croquet greens is the ball or bowl does not travel on top of the turf like a golf ball. Instead it is supported by the soil, bending the turf out of its way as it rolls. For this reason, imperfections in the soil surface or accumulation of thatch is highly undesirable. The surface can't undulate like a golf



Golf professionals and guests of the PGA Sheraton Resort Hotel play croquet at the greens next to USCA headquarters.

green. Since it must be perfectly flat, it has to have superior drainage. Any grain in the turf, usually cut at 3/16 inch, is prevented by changing the direction of cut for every mowing. Furthermore, greens are verticut frequently, every other day in some cases. Special verticutting and mowing equipment is used to achieve the highest quality greens possible.

The bowling green is a 120-foot-wide square (up to 132 feet) surrounded by a ditch and a bank. The game is played in rinks, which are between 14 and 19 feet wide extending the length of the green. This provides for seven or eight games per green. The direction of play is changed 90 degrees every day to prevent localized worn spots.

Bowling greens and grass tennis courts can actually be used for croquet. Two grass tennis courts occupy a 120-foot-wide square similar to a bowling green. The 84 by 105 foot dimensions of a croquet green fit with the outer borders of both. USCA's Osborn states, "Quite a few clubs and resorts use grass tennis courts and bowling greens to add croquet to their list of available sports. It helps justify the cost of maintaining these areas and provides another sport to attract guests and members. It's also a reason why croquet has grown so rapidly."

The Beverly Hills, CA, Park and Recreation Department spent nearly \$200,000 to rebuild three bowling greens at Roxbury Park in 1986. "Walt Disney and other Hollywood notables used to bowl on the greens at Roxbury Park," boasts Marcelino Lomeli, city park superintendent. "Our bowling club continues to be very active and an important part of the community."

Dr. Haley and his brother used to bowl at Roxbury Park in the '50s. "When I heard they were going to rebuild the greens, I was pleased to help landscape architects Erik-

son, Peters and Thoms with details," Haley said. "I'll never forget installing those greens," says Mickey Strauss, president of American Landscape, Inc., Canoga Park, CA. "There was less than 1/8 inch tolerance in the sand greens. We had to section the greens off and install the sand as if we were pouring concrete. Beneath the sand was an intricate drainage system that was also flat. We've built golf greens before, but the bowling greens were a lot tougher from the standpoint of tolerance. Dr. Haley wrote the book on bowling green construction and we wanted to make sure he was satisfied with the final results."

"There are less than 20 bowling greens in the U.S. and Canada built completely with sand," Haley pointed out. "Twenty years ago there were no real standards for construction. While I had bowled nearly all my life on all types of greens, it wasn't until I retired that I decided the game could be improved if specifications were developed. So I called the University of California at Davis to find out how our greens could be improved. I was referred to Dr. William Davis in the Department of Environmental Horticulture, who introduced me to the concept of sand rootzones. With the help of Dr. Davis and publications by Dr. John Madison, Dr. Vic Youngner, Dr. James Beard and Dr. William Daniel, I put together a booklet on bowling green construction."

Haley's book, which is now in its third edition, covers everything from sand selection to irrigation. "The key to a healthy green centers around the amount of moisture and oxygen available to the bentgrass or bermudagrass roots seven inches below the surface," Haley summarizes. "A deep root system enables the turf to withstand the short cutting and regular verticutting neces-



bowling greens for more than 400 winter residents

Lawn Bowling and Croquet

continued from page 13

sary to provide a flat, smooth and fast surface." Most recently Haley has demonstrated that removing thatch is more important to green speed than the height of cut. "When the stress on the grass due to low mowing is relieved, the strength of the turf is tremendously increased." Haley has maintained satisfactory speed with bentgrass mowed as high as 7/16 inch with little to no thatch.

Haley's design involves 16 inches of washed and sized sand on top of a flat network of drainage pipe. The Roxbury Park greens also contain a sophisticated moisture sensing system using Irrrometer sensors connected to a Motorola computerized central controller. When the moisture sensors installed seven inches deep in the sand signal the MIR-3500 controller that a preset amount of moisture exists, the controller stops the irrigation cycle.

Haley practices what he preaches at the Escondido Lawn Bowling Club in Escondido, CA, and at his summer residence in Prince George, British Columbia. "We only have an eight week growing season in Prince George in the summer," states Haley. Still Haley verticuts the Penncross every ten days. He covers the green with clear plastic to keep the bentgrass growing as long as possible. During the winter Haley becomes the greenskeeper for the Escondido club. He recommends overseeding Tifgreen hybrid bermudagrass with Penncross in the fall to protect it. "Bowling on dormant bermudagrass can damage the crown of the bermudagrass plant," says Haley. "Of course, overseeding is unnecessary if you can keep the bermudagrass actively growing."

Haley looks to Australia for much of his equipment. "There are more than 400,000 lawn bowlers in Australia," he points out. "As a result, they take maintenance of the greens quite seriously." He imports a mower from Australia called a Scott Bonar. The 30-inch-wide electric mower cuts the turf with a ten-blade reel. Each blade of grass is cut four times per mowing. During the first pass the mower overlaps the previous cut by half. Then the green is cut the same way at a 45 degree angle to the first cut.

Haley went so far as to invent his own verticutter for bowling greens. Called a Haley Planer, it consists of a verticut reel, mounted below a small tractor on a six foot long frame, with skids that keep the blades level with the surface of the green at all times. In lieu of a "Planer," Haley recommends a Ryan Ren-O-Thin or Mataway. "The verticutter is extremely important when you consider bermudagrass greens should be verticut three times per week in the summer and twice a week in the fall and spring," explains Haley.

Bill Tinsley, assistant director of parks and recreation for the City of Lakeland, FL, is an avid fan of Haley. Lakeland is a popular winter home for hundreds of Canadian lawn bowlers. The Lakeland Bowling Club, which plays at three different greens provided by the Lakeland Parks Department, has



To come within a 1/16 inch tolerance on the greens at Roxbury Park, the crew from American Landscape Inc. installed the sand like they would concrete.

nearly 400 members in the winter and 65 in the summer. "Bowlers represent an important part of the Lakeland economy during the winter," Tinsley states. In fact, the sport is important to the entire state which has more than 20 bowling clubs with thousands of members.

While Tinsley has high regard for Haley, he is trying a few methods of his own to keep the Tifgreen greens in shape. The single greatest demand a player has on the greens is their speed. "The players will come out and time the rolls before the matches," Tinsley says. "A nine-second roll would be terrible; an 11 second roll excellent." Tinsley keeps the speed on the greens in the excellent category by grooming the turf each time he mows. A small verticut attachment on the front of the Jacobsen walking greens mower lightly verticuts the bermudagrass. Four times a year the greens are heavily verticut with a Ren-O-Thin.

Speed is also the reason Tinsley does not overseed the greens for the winter. Instead he carefully supplements his slow-release fertilizer program with biweekly applications of ammonium nitrate to keep the bermudagrass out of dormancy. "If we get a surprise freeze, we can apply ammonium nitrate and the bermudagrass bounces back in about a week," he explains.

The biggest threat to the greens is the mole cricket, states Tinsley. "I have nightmares about mole crickets," he admits. "They spend the whole day waiting for us to turn on our lights for night play, and then they come swooping down on us. They could put us out of business in a week with the divots and mounds they burrow." So he can sleep at night, Tinsley makes a preventative treatment with Oftanol insecticide in the summer. Problem areas are spot-treated throughout the year.

Tinsley is very cautious with moisture on



The Haley Planer is a verticutter centered on a six-foot-long frame built for bowling greens.

the greens. The greens are irrigated with a Rain Bird manual system only when the leaf tips begin to curl. They are also dragged each morning to remove the dew. We irrigate heavily and infrequently to encourage the roots to grow down ten or more inches. "The sand provides good percolation so we have little to no runoff on these level surfaces," Tinsley adds. To keep percolation rates up, the greens are aerified, the cores removed and then toppedressed with sand. "We've switched to a finer (50 sieve) sand to reduce the resistance of the sand on the bowls," Tinsley points out.

Maintaining the greens is a full-time job for one person in both Beverly Hills and Lakeland. "If you have bowling greens, you have to maintain them correctly," says Tinsley. The Beverly Hills Parks Department lets the croquet club use one of the three bowling greens to help justify the expense to the rest of the taxpayers.

continued on page 16

Lawn Bowling and Croquet

continued from page 14

Luke Majorki, general manager of golf course maintenance at PGA National in Palm Beach Gardens, FL, has become an expert on croquet greens since the USCA moved there this year. When USCA was looking for a location where its headquarters could be next to tournament quality greens, the PGA seemed natural. The home of the PGA of America, the organization of golf club professionals, already had four golf courses, 19 tennis courts and a health and racquet club. When snow starts falling up north, club professionals pack their bags for PGA National to keep their game in top form, to compete in qualification tournaments and to relax in the Florida sunshine. The competitive golf pros enjoy testing their skills on nearly every sport and croquet was one both USCA and PGA felt was a natural.

Majorki explains, "Collin Wright, vice president of PGA National, kept saying in meetings that croquet would be a nice addition to the facility. I didn't take him seriously until he asked me how quickly I could build croquet greens if USCA moved down from New York. Collin and Jack (Osborn) had discussed the idea at length and they had a site in mind. So, I just asked when do you need them built? That was how the USCA made PGA National its new home."

With 25 years of experience in maintaining, owning and building golf courses, cro-



Sprigs of Tifgreen hybrid bermudagrass are scattered across the sand greens at Roxbury Park.

quet was a new challenge for Majorki and he jumped in with both feet. He quickly learned the difference between a golf green and a croquet green. "When they say flat, they mean flat!" remarks Majorki. Flat also meant special drainage and Majorki immediately thought about adapting the United States Golf Association (USGA) specifications for golf greens for a flat croquet green.

The decision was made to build five greens. This would provide USCA and the guests at PGA National with the largest croquet complex in the country. A site across from the PGA Sheraton Resort Hotel was selected and a number of trees were moved. Construction got underway in August 1986.

The area, slightly larger than one acre, was graded to provide a level subsurface.

More than 500 feet of drainage pipe were installed in a herringbone pattern on each of the five greens and covered with four inches of washed pea gravel. Ten inches of medium-sized sand was spread over the gravel and carefully levelled and rolled to a flat grade. After tilling in peat moss into the top few inches of sand, the greens were again levelled and rolled to a flat grade. Before the Tifgreen 328 was sprigged into the greens, the entire area was fumigated with methyl bromide. The courts were bordered with Tifway 419 sod.

Before the greens were five months old, the bermudagrass was overseeded with Derby perennial ryegrass in preparation for the first match to be held on the greens between the U.S. and England. For the next few

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The sprigs are crimped and rolled into the flat sand surface.

months the greens were verticut and topdressed lightly twice a week to obtain a smooth, firm surface. "It really takes a green a year to mature," explains Majorki, "but we didn't have that luxury. We had to speed up the greens by using Milorganite to absorb the winter sun and applied nearly 12 pounds of nitrogen as IBDU to push the ryegrass along." Majorki applied Subdue or Alliette every two weeks to prevent pythium from attacking the young, tender ryegrass.

The USCA chose the Challenge Cup between the U.S. and England for the grand opening of its new headquarters and greens. "It was like a dream come true," exclaimed Osborn. PGA National has opened a croquet pro shop next to the greens and pro-

vides a regular schedule of classes. Business has been brisk reports Majorki. "I had to assign Tom Smith to the greens full time to keep them in a condition that represents the best of the U.S.," explains Majorki.

"We have seen no signs of compaction so far," Majorki reports. "When we do, we'll increase our frequency of aerification and remove the cores before topdressing." Majorki uses a unique combination of bermudagrass and bentgrass on some of the greens on the golf courses. The Tifgreen does not go completely dormant in the winter due to the mild Palm Beach climate. Majorki has also found that about 40 percent of the bentgrass survives the summer heat. "We can maintain a mixture of the two grasses throughout the year if we want to." Major-

ki is hesitant to try the mixture on the croquet greens since it would require doubling his fungicide applications. "The ryegrass needs about half the disease control when it's mowed at 3/16 inch."

"Croquet is getting away from being just a rich man's game," says Majorki. "If a golf course has a flat area near the clubhouse, a good superintendent can build a croquet green for about the same cost as a golf green and give his members an entirely different sporting experience." If he makes the green 120 by 120 feet and adds the ditches and banks for bowling, he has given his membership two more sports besides golf. The point is the golf course superintendent has the skills to build and maintain these greens. By doing so, his club benefits and membership enjoys two more sports that were once available only to the most affluent. ☉

Editor's Note: For further information on croquet and bowling green construction and maintenance contact the following associations. American Lawn Bowls Association, Earl Torango, secretary-treasurer, 11660 S.W. King George, King City, OR 97224, (503) 639-9178. United States Croquet Association, Jack Osborn, president, 500 Avenue of Champions, Palm Beach Gardens, FL 33418, (305) 627-3999. Dr. Edgar Haley's book, Construction of the Lawn Bowling Green is available for \$10 from Rudi Tolnay, 16630 Roca Drive, San Diego, CA 92128.

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