USGA JOURNAL
AND
TURF MANAGEMENT

THREE GENERATIONS IN CHAMPIONSHIPS

Three generations of the Cruickshank family, Mrs. Elsie C. Hoke, daughter (left), Grandfather Bobby and Miss Diana Hoke, granddaughter, are planning to compete for the USGA Women's Amateur, Open and Girls' Junior Championships, respectively, again this year, just as they did last year. Bobby, professional at the Chartiers Country Club, Pittsburgh, was runner-up in the Open in 1923 and tied for that position in 1932.

APRIL 1955

USGA JOURNAL AND TURF MANAGEMENT

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Edited by Joseph C. Dey, Jr., and Frank C. True. All articles voluntarily contributed.

USGA COMPETITIONS FOR 1955

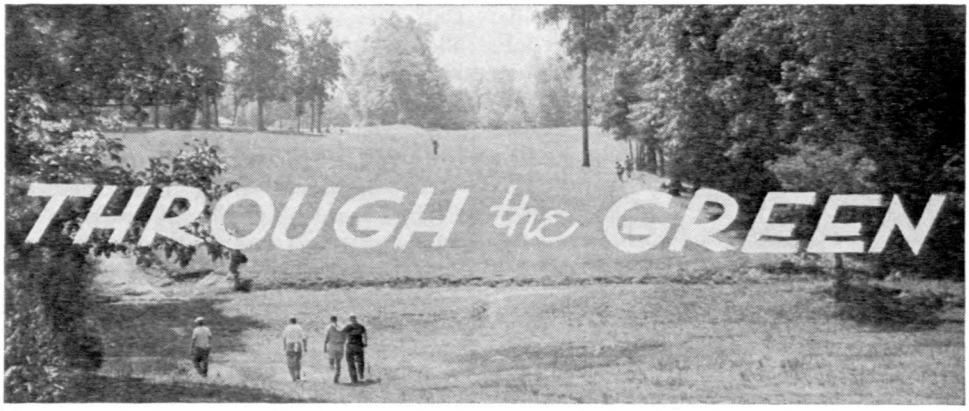
Walker Cup Match—May 20 and 21 at St. Andrews, Scotland. Men's Amateur Teams—Great Britain vs. United States.

(Dates entries close mean last dates for applications to reach USGA office, except in the case of the Amateur Public Links Championship. For possible exceptions in dates of Sectional Qualifying Rounds, see entry forms.)

Championship	*Entries Close*	*Sectional Qualifying Rounds*	*Championship Dates*	*Venue*
Open	May 20	June 6	June 16-17-18	Olympic Country Club, San Francisco, Cal.
Women's Open	June 17	None	June 30, July 1-2	Wichita Country Club, Wichita, Kansas
Amateur Public Links	*June 3	†June 19-25	Team: July 9 Indiv.: July 11-16	Coffin Municipal G. C., Indianapolis, Ind.
Junior Amateur	July 5	July 19	August 3-6	Purdue University, Lafayette, Ind.
Girls' Junior	August 3	None	August 15-19	Florence C.C., Florence, S.C.
Women's Amateur	August 8	None	August 22-27	Myers Park C. C., Charlotte, N. C.
Amateur	August 12	August 30	Sept. 12-17	Country Club of Virginia, Richmond, Va.
Senior Amateur	August 26	Sept. 8	Sept. 26-Oct. 1	Belle Meade Country Club, Nashville, Tenn.

* Entries close with Sectional Qualifying Chairmen.

† Exact date in each Section to be fixed by Sectional Chairman.



Two-Week-Old Founder

There are, of course, no age limits for Founders of "Golf House." All of which lends added interest to the following letter, in part, from Mrs. Elizabeth K. Miller, of Monroe, La.:

> Please enroll Elizabeth Stuart Miller as a Founder of "Golf House." She is only two weeks old, but some day I hope she will become a golfer and derive as much pleasure from the game as her mother.

The "Golf House" Fund has increased to $103,584 and the number of Founders now stands at 5,615. We still need $6,410. The Fund is for the purchase, equipment and maintenance of "Golf House." Those who have enrolled as Founders recently are:

Individuals

Thomas Wilson Beck
Richard D. Chapman
F. B. Dickinson
J. A. Ducournau
C. L. Egenroad
Edward M. Farrell
Mrs. Helen Anderson Firth
Mrs. Vivienne Gemmell
Mr. & Mrs. Clarke L. Hall
Dr. & Mrs. Cameron B. Hall
Mr. & Mrs. James L. Hall
Mr. & Mrs. James L. Hall, Jr.
Fred T. Hogan
A. Patton Janssen
Benno Janssen, Jr.
Mrs. Edith Patton Janssen
Mary Patton Janssen
James V. Kelley
Mrs. Winifred Campbell Kregloe
Elizabeth Stuart Miller
Mrs. Llewellyn Miller

Association

Western Seniors' Golf Association

The Open Championship

There will be seven fewer sectional qualifying sites for the USGA Open Championship this year. In all, there will be 25.

The qualifying rounds will be played on Monday, June 6, except at Los Angeles, where the qualifying will occur on Thursday and Friday, June 2 and 3, and at San Francisco, where the dates will be Monday and Tuesday, June 6 and 7. The qualifying sites at Los Angeles will be the Bel-Air Country Club and the Brentwood Country Club; at San Francisco, the Lake Merced Golf and Country Club and the San Francisco Golf Club.

The starting field in the Championship proper at the Olympic Country Club, San Francisco, on June 16, will consist of 162 players.

Entries must reach the USGA office by 5 P.M. on Friday, May 20.

In addition to Los Angeles and San Francisco, the sectional qualifying sites are: Country Club of Birmingham, Birmingham, Ala.; Phoenix Country Club, Phoenix, Ariz.; Lakewood Country Club, Denver, Colo.; Columbia Country Club, Washington, D. C.; West Palm Beach Country Club, West Palm Beach, Fla.; Waialae Country Club, Honolulu, Hawaii; Lincolnshire Country Club, Chicago, Ill.; New Orleans Country Club, New Orleans, La.; Essex County Club, Manchester, Mass.; Birmingham Country Club and Red Run Golf Club, Detroit, Mich.; Woodhill Country Club, Minneapolis, Minn.; Kansas City Country Club, Kansas City, Mo.; Bellerive Country Club, St. Louis, Mo.; Baltusrol Golf Club (New York metropolitan), Springfield, N. J.;

Highland Country Club, Fayetteville, N. C.; Hyde Park Golf and Country Club, Cincinnati, Ohio; Pine Ridge Country Club, Cleveland, Ohio; Waverley Country Club, Portland, Ore.; Philmont Country Club (North Course), Philadelphia, Pa.; Chartiers Country Club, Pittsburgh, Pa.; Colonial Country Club, Fort Worth, Texas; The Country Club, Salt Lake City, Utah, and Seattle Golf Club, Seattle, Wash.

National Golf Day

How would you like to match strokes with the reigning USGA Open Champions —on a handicap basis, that is?

Such an opportunity will be presented to men and women golfers throughout the United States on National Golf Day, Saturday, June 4. Competition will be at 18 holes handicap stroke play. Each entrant will pay a $1 fee and all proceeds, with no deductions for expenses, will go to the National Golf Fund, Inc., for disbursement to the American Red Cross, which will be the principal beneficiary this year, and worth-while golf charities and enterprises.

Ed Furgol, USGA Open Champion, will be the opponent for men. Women will match strokes with Mrs. George Zaharias, USGA Women's Open Champion. Furgol and Mrs. Zaharias, accompanied by Gene Andrews, USGA Amateur Public Links Champion, and Allen Lee Geiberger, Jaycee Junior Champion, will play at the Olympic Country Club, San Francisco, which will be the scene of the USGA Open Championship later in June.

The USGA, which is cooperating with Life Magazine and the Professional Golfers' Association, sponsors of National Golf Day, has urged its Member Clubs to include this event in their schedule of tournaments. Men who beat Furgol's score will receive medals. Women who top Mrs. Zaharias' card will receive charm bracelet medals. At clubs where women's competitions are not permitted on Saturday, some other day preceding June 4 may be used.

In the last three years more than $317,000 has been distributed through National Golf Day, $23,700 of which has been allotted to turfgrass research and education, disbursed at the direction of the USGA Green Section.

1956 Amateur Championship

An invitation from the Knollwood Club, Lake Forest, Ill., to entertain the 1956 Amateur Championship has been accepted by the United States Golf Association. The dates will be Monday through Saturday, September 10 to 15, inclusive.

Washington Debates "D.S."

A topic which concerned neither world problems nor the 1956 Presidential campaign was the talk of political Washington recently. True to custom, it was given the alphabetical classification of "D.S."—Displaced Squirrels.

When squirrels were first observed romping about on the President's putting green on the White House lawn, presented to him by the USGA, nothing was thought of it. However, when the rodents began scratching up the putting surface, it became a serious matter.

First, an expert in electronics was called in. He suggested the use of extremely high-pitched sound which theoretically would send the squirrels scampering. They didn't scamper. Next the Army Signal Corps tried putting together a tape recording of sounds allegedly offensive to squirrels, but it didn't offend.

Whereupon box-type traps were baited and placed around the golf green at night. Three squirrels were caught and transported to new and roomier "homes" in wooded park areas.

Then Washington became divided into two camps—Pro Squirrel and Con Squirrel. The former declared that squirrels on the White House lawn had become a tradition which should be perpetuated. It was even hinted in some circles that banishment of the little animals might be used as anti-capitalistic propaganda by the Russians.

To which the Con Squirrel group replied that it was all very nutsy.

USGA "ETIQUETTE" FILM GIVEN A NATIONAL AWARD

The new USGA motion picture entitled "The Rules of Golf—Etiquette" has been awarded a Recognition of Merit by the Film Council of America. The film had been selected by pre-screening jurors for final competition in the 1955 Golden Reel Film Festival in New York, in the recreation class. A winner was determined in each class, and Recognitions of Merit were given to a few other leading films, of which the USGA picture was one.

There have been more than 200 bookings of the "Etiquette" picture.

The film is a 16 mm. Kodachrome with a running time of 17½ minutes. The importance of etiquette is emphasized visually through various violations of the code in the course of a family four-ball match. Ben Hogan appears in several scenes. Robert T. Jones, Jr., makes the introductory statement.

Shipping of prints will be handled by National Educational Films, Inc., 165 West 46th Street, New York 36, N. Y., which produced the film in cooperation with the USGA. The rental fee is $15, which includes the cost of shipping the print to the renter.

Necrology

We record with much regret the passing of:

C. Dewey Allen, of Grand Rapids, Mich., a member of the USGA Sectional Affairs and Junior Championship Committees since 1948.

Clarence (Buddy) Overend, of Pittsburgh, Secretary of the Western Pennsylvania Golf Association and for 30 years Director of Athletics at Carnegie Tech.

Fitzwilliam Sargent, of Philadelphia, a member of the 1949 United States Seniors golf team which played abroad, a governor of the Merion Golf Club, and former captain of the Harvard golf team.

SPORTSMAN'S CORNER

James G. Jackson, of Glendale, Mo., a member of the 1955 Walker Cup Team, was 5 up on Don Pegler, Jr., of Lincoln, Neb., after eleven holes in the first round of the Trans-Mississippi Tournament at the Cherry Hills Country Club, Denver, Colo., last year.

On the par 3 twelfth hole, Jackson's tee shot finished about twenty feet past the cup. Pegler's shot landed in a dry creek-bed in front of the green. After his fourth shot, Pegler, unfortunately, was still some fifteen feet from the hole.

At this juncture, Jackson's caddie, a lad of some 14 years, who was not familiar with the rules, noticed a ball-mark between Jackson's ball and the hole. Before Jackson could stop him, the youngster repaired the ball-mark. Whereupon Jackson immediately called the hole on himself. Pegler insisted he wouldn't take the hole, inasmuch as Jackson had a possible 2 and an almost certain 3 to win, but the latter was adamant.

Pegler finally took the hole, but Jackson, after a few anxious moments, finally won the match, 3 and 2, and went on to win the tournament, defeating Rex Baxter, Jr., 4 and 3, in the final.

USGA Handicap System Adopted

The Metropolitan Golf Association has approved use of the USGA Basic System for computing all men's handicaps. Metropolitan clubs which still prefer to use the USGA Current System may do so.

The MGA Executive Committee is advocating the change from the Current to the Basic System because it believes a Basic handicap is a truer indication of a player's potential playing ability, because there will be less fluctuation in handicaps, due to erratic rounds, and because it will be easier to keep handicaps up to date.

Partners Shoot Aces on Same Hole

This oddity happened recently on the 9-hole Fort McPherson, Ga., Golf Course. Capt. S. L. Johnston, Jr., of Greenville, Miss., and Cpl. Clyde Feltes, of Moline, Ill., were partners, playing against MSgt Charles John Petrie and SFC Charles Campagna. Capt. Johnson sank a drive off the tee on the 165-yard 6th hole on the out nine. When the players reached the 15th hole—the same hole as the 6th—Feltes sank his tee shot for the second ace of the round.

PUTTING THE GOLF BEFORE THE CART

by

JOSEPH C. DEY, Jr.

USGA Executive Director

"Caddie Willie" plied his trade at the Bruntsfield links in Edinburgh, Scotland, in the early 1800s. He carried his wardrobe on his back, wearing several suits of clothing at a time, with a golfer's old red coat outermost. He lived in a garret, never had a fire, subsisted entirely on cold milk and bread, paid his rent regularly, was very honest, and served the golfers well.

There was a caddie.

If the ghost of "Caddie Willie" could look in upon the doings on some American golf courses today, he might wonder whether it was he or golf who had expired.

He must at least be twisting a bit in his grave if he is aware of the modern development of striking a ball with a golf club, climbing into a little motorized cart or buggy, riding a couple of hundred comfortable yards, disembarking and playing another stroke, then climbing back into the conveyance for another ride.

If automotive golf were carried to its logical conclusion, we'd all wind up sitting on the clubhouse porch and firing all our shots out of a rifle—or so says J. Wood Platt, a leading Philadelphia amateur and official. Automotive golf might in turn be succeeded by pushbutton golf.

The subject of mechanized transportation for playing golf has evoked deep soul-searching by club boards throughout the land. It is a subject which must be dealt with, regardless of one's personal preferences.

A primary question is whether golf is golf when you don't navigate under your own steam. Most golfers we have sounded out informally feel that mechanical transportation should not be permitted except when a doctor certifies it is advisable for an individual.

A member of the USGA staff expressed his personal opinion as follows:

"I believe that golf is a great sport, and part of the game involves walking. If players physically capable of walking nine and 18 holes find it too tiresome, they shouldn't change the game; they should change their sport."

No Carts in USGA Events

The USGA does not permit the use of automotive transport in its competitions. The official position of the USGA is given in the following Rules of Golf decision:

USGA 54-32
Rule 36-7

Q.1: Do the Rules of Golf prohibit a player from using automotive transportation?

A.1: No. It is, however, contrary to the custom of the game.

Q.2: If a Committee wishes to prohibit the use of automotive transportation, how may it be done?

A.2: The Committee must adopt a regulation and announce it in advance. The USGA does this for USGA competitions.

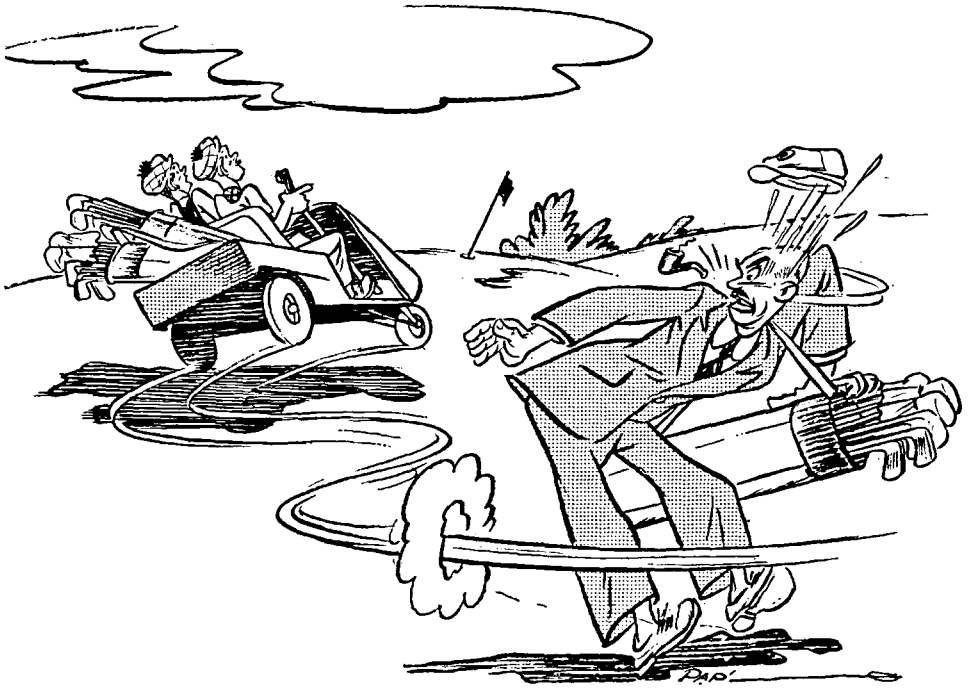
Q.3: If the Committee has not adopted a regulation and if a player uses automotive transportation, does his opponent have any right of protest under the Rules of Golf?

A.3: No.

A point of view which deserves sincere attention was expressed by Thomas M. Quinn, of Long Island City, N. Y., in the following message to the periodical "Golf World":

"I have been a devotee of golf for 30 years. In recent years I have been suffering from a heart condition, and despite a fairly good recovery I have been ordered by my physician to limit my game to nine holes. This, with the medicine prescribed, is a bitter pill.

Will It Come To This?



A futuristic view of a new golf problem, as seen by "Pap", well known sports cartoonist for the Associated Press, who drew this expressly for the USGA Journal and Turf Management.

"However, last summer on a visit to Montauk Point, Long Island, a new ray of hope dawned. I noticed they used electric carts. I immediately hired one at $6 a round. This is a fairly hilly course and for the first time in two years I experienced the pleasure of playing 18 holes.

Cart Is Barred

"This made me very enthusiastic as to the potentialities of the use of carts on my own course. The pro at Montauk cited the case of a man 88 years of age who, through the use of the cart, makes the Montauk course five times a week. I purchased one forthwith. My club barred it on the ground it would harm the course.

"The after-effect of a heart attack is perhaps worse than the attack itself. You are continually living with mental reservations of doing things that are out of your sphere of limitation. Your entire system feels as though it is in a vise. The only way to overcome this fear is by doing things in a most deliberate manner. In my case, after making up the usual foursome I lived in fear that I would be unable to complete the course.

"It is only a question of time when all clubs will see this question in the true light. When boards of directors react favorably, many members who are inactive due to heart conditions will be given a great lift in the morale department."

How Carts Affect Courses: Views of Turf Scientists

What is the effect of motorized transportation on golf course turf?

The USGA has a Green Section with a staff of six turfgrass scientists—agronomists highly experienced in problems of golf course maintenance, both theoretical and practical. They are located in different sections of the country, and deal with wide

varieties of grasses, climates, soils and related factors on hundreds of courses.

Here are their views:

CHARLES G. WILSON, WESTERN DIRECTOR OF USGA GREEN SECTION, DAVIS, CAL.:

Golfers' increased use of automotive transportation, either gasoline or electric-powered carts, indicates that riding in preference to walking is not just a passing fancy. Contrary to many manufacturers' opinions, their use has and will continue to cause damage to golf course turf.

Under wet, soggy conditions resulting from either rain or irrigation, ruts or deep wheel tracks may be formed to interfere with the basic concept of playing the ball as it lies. Under so-called dry or ideal use conditions, many soils are more subject to compaction than when wet or saturated as far as visual damage is concerned.

Thus, use at any time taxes the ability of the maintenance crew, and increases the budget for additional fertilizer, aeration, more wear-resistant grasses and, in many instances, construction of asphalt pathways from green to tee and tee to start of the fairway.

In the southern half of the Western Region, where bermuda is the basic grass for fairways and tees, damage is of lesser magnitude than in the north where bluegrasses, fescues and bentgrasses predominate.

ALEXANDER M. RADKO, NORTHEASTERN DIRECTOR OF USGA GREEN SECTION, NEW BRUNSWICK, N. J.:

The heavy and continued use of automotive transportation on golf courses in the Northeast may mean the difference between good and poor playing turf.

Cool-season grasses, such as the bluegrasses, fescues and bentgrasses, which predominate in the Northeast, are in their "danger period" during the hot months of July and August, when electric car-owners would use their cars most.

At some time during that period unwatered cool-season turfgrasses are at the wilting stage; if they are in a state of wilt, the use of many electric cars may mean the difference between turf and no turf.

On watered fairways or just after heavy rainfall, wheel marks and soil compaction will be other factors to consider. Undoubtedly, too, the compaction that would result from the heavy use of automotive transportation on wet soils will result in the loss of some of the permanent grasses.

Soil compaction has been one of our more serious problems on turf areas previous to the innovation of electric cars. What the heavy use of these vehicles will do, only time would tell.

We have all observed the damage to turfgrasses as a result of the use of the small bag-toting caddie carts, especially on areas where players are channeled around greens and tees. Player education is a difficult program to get across to a membership of 300 to 400 golfers. There is no reason to believe that electric car-users will be any easier to educate.

At one course last summer some "legalized vandalism" was observed. The owner played his shot from a trap, hopped into the car, drove through the trap, and went up across the green. Unfortunately, the sand was not soft enough to bury the "beast".

The only use we now see for these cars is by persons who, because of reasons of health (age or physical infirmity), cannot now get around a golf course. We would, however, leave to the superintendent and his green committee the decision as to whether cars should be allowed on the course on any given day.

Of course, there are many other factors to consider—not least among which is the difficult question of rules and regulations governing play among users vs. non-users. In any case we feel that the prime consideration should be the protection of the tremendous country club investment—the golf course and its greenway.

CHARLES K. HALLOWELL, MID-ATLANTIC DIRECTOR OF USGA GREEN SECTION, BELTSVILLE, MD.:

The operation of electric carts over fairways is likely to increase soil compaction.

In studies at The Pennsylvania State University, Dr. R. B. Alderfer found evidence indicating that compaction can de-

velop rather rapidly. On a soil subjected to occasional trampling, 11% runoff was measured. After soil had been allowed to dry for 24 hours, it was given a fair amount of compaction by trampling. Runoff again was determined and water loss had increased from 11% to 55%.

A good sandy soil is not insurance against compaction. Employing two soils —one a clay loam and the other a sandy loam—Dr. Alderfer made determinations of non-capillary porosity, runoff and infiltration capacity. There was no appreciable difference between the two soil types—a fact that has been verified many times.

More frequent use of mechanical aerifying equipment to overcome the compacting effect on the soil is the superintendent's solution to the use of electric carts.

B. P. ROBINSON, SOUTHEASTERN DIRECTOR OF USGA GREEN SECTION, TIFTON, GA.:

Only a few clubs apparently have enough carts where there is enough traffic for one to evaluate the damage.

Damage to bermuda and ryegrass turf from automotive transportation has been largely due to continuous traffic on an area and operation on wet turf.

Turf producers are faced with a problem which must be solved by education of members, application of knowledge now on hand, and by additional study.

WILLIAM H. BENGEYFIELD, AGRONOMIST, USGA GREEN SECTION, BELTSVILLE, MD.:

Golf is played on grass. Hard and fast rules cannot be adopted as to when electric carts may or may not damage turf. There are too many variables—weather conditions, soil types, grass types, soil moisture, and the past and the present seasons must be considered. For good turf it is best that such carts be not used at all.

Limited numbers, properly regulated, would cause no concern. Wide acceptance of the carts would be ruinous to the course. Once fairway turf is gone, due to disease, carts, insects or weeds, the use of electric carts would be out of the question for a year or more. Can you visualize a fairway after crabgrass has taken it over during the summer and electric carts during a wet fall?

Proper and considerate use of carts may make them acceptable under certain conditions. The more considerate of the course each operator is, the more carts each golf course could handle without undue damage.

What Clubs Can Do About Motorized Carts

By DR. MARVIN H. FERGUSON

Southwestern Director and National Research Coordinator, USGA Green Section, College Station, Texas

Golf course superintendents have cause to be concerned about the damage which motorized carts may inflict. Carts were first used by older golfers and physically handicapped persons who had difficulty in walking. Now they are used by many golfers regardless of physical fitness or ability. Types range from "one-seater" gasoline-powered scooters to small automobiles equipped to carry six passengers.

Nearly everyone agrees that they are capable of doing a great deal of damage to the turf. There is no evidence, however, which would lead one to believe that the use of carts will be diminished, regardless of opposition.

Therefore, the superintendent who tries to keep up with new developments and prepare for changes in the demands upon his turf must seek ways to keep good turf despite this new development. Several approaches to the problem seem to offer some promise. Some of these approaches are not altogether under the control of the superintendent. Close cooperation between club members and the superintendent is essential if an answer to damage by buggies is to be found.

Regulation of Carts

Some clubs have banned certain types of vehicles which have objectionable features, such as narrow tread tires, single-wheel drives, or noisy engines.

The regulations which concern the superintendent primarily are those which pertain to the condition of the course.

When the grounds are wet, golf buggies will cause serious damage. The superintendent is the person most likely to be able to judge whether the condition of the course permits their use.

Because of the various plans of cart ownership and operation, however, some superintendents find that they are subject to much criticism when they make a "close decision." The person who stands to gain financially from the use of carts is quite likely to take a lenient attitude in the matter of wet grounds.

DR. MARVIN H. FERGUSON

It appears that one satisfactory plan of operation is to have the club own or lease all carts, hire someone to take care of their maintenance, and make it a function of the Board of Directors or the Green Committee to make the decisions as to when the course is in condition to accommodate wheeled traffic. Decisions of the Committee should be based on advice of the superintendent. If this plan is followed, the club profits when carts are used, but it also sustains the damage when they are used destructively.

Driver Education

Carts fitted with reasonably large tires and operated with reasonable care do no more damage than maintenance equipment. Maintenance equipment is used over the whole golf course, however, whereas operators of carts tend to steer in the same paths time after time.

TYPICAL REGULATIONS FOR MOTORIZED CARTS

When a golf course permits use of motorized carts, many new problems arise. Regulations are necessary to cover such matters as the right of a cart-user to play through slower groups, insurance, under what conditions of turf the carts may be used, etc.

The following rules adopted by the Siwanoy Country Club, Bronxville, N. Y., give an insight into some of the questions:

1. Only electric battery-driven cars will be permitted.
2. Size of machine shall be limited to accommodate not more than two people.
3. No horns, whistles, lights or noisemakers of any kind shall be permitted as attachments to carts.
4. No cart may be used for play without a caddie accompanying players.
5. In the event of rain or any acts of the elements, the Starter must check with the Golf Course Superintendent and/or the Chairman of the Green Committee, and that decision shall be final for that day.
6. Chairman of the Green Committee shall suspend the privileges of any owner of a cart for not less than 10 days for each infraction of rules.
7. Use of a cart shall not under any circumstances be construed as giving a player or players any special rights or privileges on the golf course.
8. In club tournaments based on match play, the owner of a cart shall be permitted the use thereof only if it meets with the approval of his opponent.
9. Carts shall not cut across fairways or drive on aprons surrounding the greens.
10. No carts should exceed 1,000 pounds, and tires shall be pneumatic.

Driver education is an approach that appears to have merit. Manufacturers of carts would seem to have an obligation to promote careful operation and to eliminate features which would be harmful to golf courses.

Signs may be erected to keep carts off tees and the approaches to greens and to direct traffic away from worn areas. Most members will observe these signs. The unthinking person can do more damage than the willful violator of rules.

Pictures of serious damage may be posted on the bulletin board. Club members resent flagrant disregard for the golf course and they can exert a great deal of pressure on the offender.

Condition the Course

There are numerous ways in which cart damage can be minimized by preventive maintenance.

Cultivation to relieve compaction will need more attention.

A dense, tight turf resists wear better than an open turf. This may imply a change in the species of fairway grass. Certainly, a more adequate fertilizer program will be helpful.

Watering of fairways should be thorough and infrequent. This is true whether carts are used or not, but it may be easier to show club members that wet grounds are more likely to suffer from traffic damage than it is to show them that too much water causes shallow roots.

Insofar as is possible, features that channel traffic should be eliminated.

Low spots that tend to stay wet for long periods should be drained or raised.

Where possible, steep grades that cause slipping or wheel spinning should be eased.

Pave small areas where traffic is concentrated (ends of bridges, etc.) and where turf cannot be kept.

It is believed that any club should be prepared to accept an increased maintenance budget before it decides to permit the use of motorized carts.

The far-sighted superintendent should take stock of his golf course to determine what changes will need to be made to accommodate an increased use of carts. He should present his committee with an estimate of the costs of such changes and the reasons for making them.

It is believed that golf course superintendents have the "know-how" and the resourcefulness to keep good turf in spite of this new difficulty, provided their clubs support them in the matters of regulation, education and an adequate budget for conditioning the course.

You can't help a little child up the hill without getting nearer the top yourself.

USGA PUBLICATIONS OF GENERAL INTEREST

THE RULES OF GOLF, as approved by the United States Golf Association and the Royal and Ancient Golf Club of St. Andrews, Scotland. Booklet, 25 cents (special rates for quantity orders). Poster, 25 cents.

ARE YOUR LOCAL RULES NECESSARY? a reprint of a USGA Journal article containing recommendations regarding local rules. No charge.

THE RULE ABOUT OBSTRUCTIONS, a reprint of a USGA Journal article. No charge.

USGA GOLF HANDICAP SYSTEM FOR MEN, containing recommendations for computing Basic and Current Handicaps and for rating courses. Booklet, 25 cents. Poster, 10 cents.

THE CONDUCT OF WOMEN'S GOLF, containing suggestions for guidance in the conduct of women's golf in clubs and associations, including tournament procedures, handicapping and course rating. 25 cents.

HANDICAPPING THE UNHANDICAPPED, a reprint of a USGA Journal article explaining the Callaway System of automatic handicapping for occasional players in a single tournament. No charge.

TOURNAMENTS FOR YOUR CLUB, a reprint of a USGA Journal article detailing various types of competitions. No charge.

PROTECTION OF PERSONS AGAINST LIGHTNING ON GOLF COURSES, a poster. No charge.

MOTION PICTURES ON GOLF (list). No charge.

MOTION PICTURES RELATING TO GOLF COURSE MAINTENANCE (list). No charge.

HOLE-IN-ONE AWARDS. No charge.

AMATEURISM IS IN THE HEART, a reprint of a USGA Journal article by E. G. Grace. No charge.

BETTER LAWNS TO COME, a reprint of a USGA Journal article. No charge.

TURF MANAGEMENT, by H. B. Musser (McGraw-Hill Book Co., Inc.), the authoritative book on greenkeeping. $7.

USGA CHAMPIONSHIP RECORD BOOK. Detailed results of all USGA competitions since their start in 1895. $2.

USGA JOURNAL AND TURF MANAGEMENT, a 33-page magazine published seven times a year. $2. a year.

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WANTED - - - A SCORE FOR EVERY ROUND

by

W. O. BLANEY

Chairman, USGA Handicap Committee

EVERY GOLFER who has an ounce of honesty in his veins knows his correct score for any given round is based on (and must include) every stroke he has played during that round.

What every golfer may not know, or realize, is that his correct handicap for any given period of time is based on (and must include) every score he has made during that time.

This means that every score made is just as important to proper handicapping as every stroke played is to proper scoring. Accordingly, the player who fails to record every stroke he plays and the player who fails to turn in every score he makes are both taking an equally unfair advantage of their fellow competitors.

The player who does not count all his strokes is generally called dishonest, but the player who does not turn in all his scores is oftentimes excused on the grounds of ignorance of the handicap system requirements. There is some justification for this latter view because in times past many handicap systems were based on a certain number of the player's lowest scores made during the year, irrespective of the number of rounds played, and called for the posting of the player's lowest scores only.

Times and Customs Change

Times have changed, however, and practically every modern system bases handicaps more equitably on a specified percentage of ALL the scores made by each player. Under the present *USGA Golf Handicap System for Men*, a Basic Handicap is computed from the lowest 20% of a player's scores, while a Current Handicap is computed from the lowest 66-2/3% of his scores. To be a bit more specific, a Basic Handicap is figured from the lowest 10 of the player's last 50 scores (or, if fewer than 50 scores are posted, from the lowest 20% of his available scores), and a Current Handicap is figured from the lowest 10 of his last 15 scores.

Failure to report a score for every 18-hole round played leaves the handicapper with insufficient material to work with and results in certain discrepancies and inequities. For example, every score not turned in will increase the spread of the total number of scores from which the player's lowest 10 are selected, thereby delaying a possibly justifiable revision in his handicap.

Also, if a player turns in only his better scores, his handicap, computed from a percentage of these better scores, will be lower than he is entitled to and will prevent him from winning his share of prizes and matches.

(*Continued on page 19*)

MEN'S HANDICAPS FOR CHAMPIONSHIPS

Effective this year, handicaps submitted by amateurs as a basis for eligibility for the Amateur, Senior Amateur and Open Championships must have been computed in accordance with the USGA Golf Handicap System for Men (1953 edition). Either basic or current handicaps will be acceptable.

While the USGA has long maintained a handicap qualification as a basis for eligibility of amateurs in these championships, it has not previously specified the method by which these handicaps should be computed.

Scores to be recorded shall be only those made when the player has complied with the Rules of Golf. Scores made under "winter rules", general "teeing up" or "preferred lies" must never be used for handicapping purposes.

ST. ANDREWS TESTS THE TOTAL GOLFER

by

WILLIAM C. CAMPBELL

Captain, Walker Cup Team

TO REPRESENT one's country in international competition is the ultimate thrill for an athlete. This is true of golfers in any Walker Cup Match, as this year's American Team soon will know.

Surround the fun and challenge of top-flight competition with the atmosphere of the Walker Cup tradition; stage it in a picturesque setting on the East Coast of Scotland, across the North Sea from Norway, in view of the snow-capped Highlands and in the shadow of the old University town; invite a huge gallery of politely loyal British golf-lovers; draw exciting matches between friendly yet determined opponents, and hoist the Union Jack and the Stars and Stripes side by side. Do all that, and you have conjured up the scene for our meeting with the British on May 20-21 at St. Andrews.

The Old Course is unique. To play a round there is to have a new type of golfing experience. The problems differ with the varying weather. The month of May usually provides a variety of cold, rain and wind. Somehow the Old Course seems at its best when playing conditions are the most trying.

Wind-Swept "Links"

The British have many inland "park" courses that make visiting Americans feel at home. Their major tornaments, however, including the Walker Cup Match and the British Amateur, always are played on the wind-swept sea-side "links", which are treeless layouts, usually on flat terrain, built on sand foundations. They grow short grass, drain well, are hard to the bounce and fast to the putt.

The Old Course itself is the prime example of this characteristic British test of golf and the golfer. Only one member of our Team has played there before, that honor having befallen me. The others will go several rounds before they begin to know or appreciate this handiwork of nature. The hard and fast greens are large and undulating. The fairways, generously sprinkled with deep little bunkers not unlike bomb craters, offer few level lies amid their countless little dips and bumps. From the trees there are few reference points for direction, so one really must know what lies ahead.

The course itself is generally two fairways wide, as it literally goes out on an unprotected half-peninsula, loops around and comes back. Seven greens are double, providing two cups each on their large surfaces. For example, the combined fifth and thirteenth green is a full acre in size. Another feature of the two-way course is that changing directions of the wind keep the golfer always thinking as he plays this great course of many moods. Incidentally, the galleries are kept off the course itself, which is the precedent for the successful USGA experiment of last year.

The Old Course is, like others, softened by long and accurate driving. Still, its demands are many, such as that for clever lag-putting. Short putts perhaps are easier with the small British ball, but the long ones can be very "long" and difficult, with gusty wind adding to the trickiness. Also, the hard, sloped greens and the winds combine to require intelligently controlled iron play. Run-ups often may be the only solution.

All things considered, the Old Course tests the player's mental equipment as few golf courses can. Not many Americans like or respect it on first acquaintance, but after exposure to the variety of its unique

charm and character, few fail to regard it as exacting test of the golfer as a total person. No other course is so generally revered among golfers everywhere. None can match its ageless greatness.

Both Sides Are Strong

It is a high honor to play for the Walker Cup, and it is our 1955 Team's good luck to be going to St. Andrews. We will find a British side of able, experienced golfers who can point to the record in counting their chances best on the Old Course, and who are heart-set to win there on May 20-21. But I can boast of a strong U. S. Team, too, and guarantee that we will do our best to bring the Cup back across the Atlantic. Regardless of the outcome, however, our fellows will come home better and wiser players after the golfing experience of a lifetime.

Walker Cup Team Sails May 5

THE WALKER CUP TEAM will sail on the SS America from New York on May 5. Following the Walker Cup Match all members of the Team except E. Harvie Ward, Jr., of San Francisco, will compete in the British Amateur Championship at the Royal Lytham and St. Anne's Golf Club, St. Anne's, Lancashire, starting on May 30 and ending June 4.

The Team is scheduled to arrive in Southampton late in the afternoon on May 12.

Although Richard L. Yost, of Portland, Ore., and Bruce H. Cudd, a fellow townsman, are the only newcomers to international play, Captain Campbell is the only member of the Team who competed abroad in 1951.

In the last previous match, played in 1953 at the Kittansett Club, Marion, Mass., Donald R. Cherry, of Wichita Falls, Texas; James G. Jackson, of Glendale, Mo., and Ward, in addition to Campbell, were members of the Team.

Following are background sketches of members of the 1955 Team:

WILLIAM C. CAMPBELL, CAPTAIN. Mr. Campbell is a veteran of the 1951 and 1953 Walker Cup Teams and of the 1952 and 1954 Americas Cup Teams. In 1954 he was runner-up in the British and the Canadian Amateur Championships. A graduate of Princeton, he is 33, an insurance agent and broker in Huntington, W. Va., and is married.

While attempting to extinguish a fire which started as he was making Christmas candles with his family last December, he suffered serious burns on his hands, arms, face and neck and was hospitalized.

Campbell went to the fifth round of the USGA Amateur Championship in each of the last three years and to the fifth round of the British Amateur Championship in 1953. He previously was runner-up in the Canadian Amateur in 1952 and was third amateur in the 1954 USGA Open.

In the 1953 Match he competed only in foursomes and he and Charles R. Coe lost to Gerald H. Micklem and John L. Morgan, 4 and 3. In the 1951 Match he defeated R. Cecil Ewing, 5 and 4,

WILLIAM C. CAMPBELL

in singles, and he and Frank R. Stranahan halved Ronald J. White and Joseph B. Carr in foursomes.

DONALD R. CHERRY. Mr. Cherry was a member of the 1953 Walker Cup Team and the 1954 Americas Cup Team. He is 30, a bachelor and a native of Wichita Falls, Texas. As a professional singer of popular songs, he cuts records and appears on radio and television networks and in theaters and night clubs throughout the country.

Last year he was a quarter-finalist in the USGA Amateur Championship, losing to Arnold Palmer, and went to the fourth round of the Canadian Amateur. In 1953 he won the Canadian Amateur and was a semi-finalist in the Western and South-

DONALD R. CHERRY

ern Amateurs. In 1952 he was a semi-finalist in the USGA Amateur, runner-up in the Metropolitan (New York) Amateur and quarter-finalist in the Mexican Amateur.

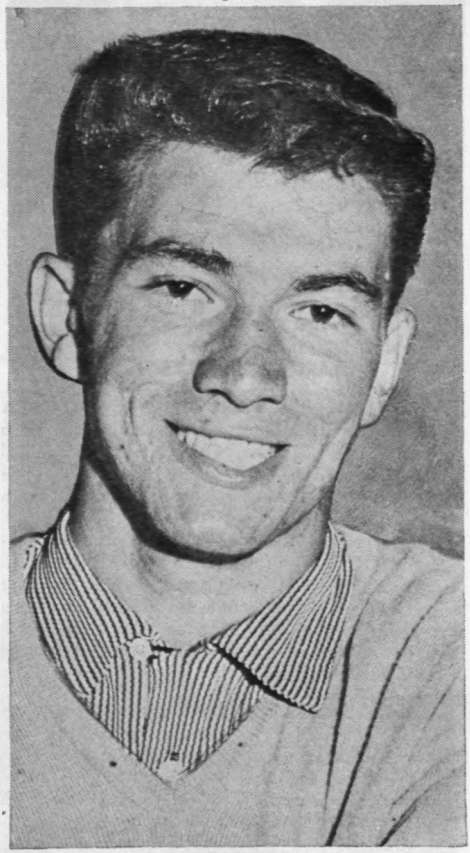
In the 1953 Match he defeated Norman V. Drew, 9 and 7, in singles, but did not participate in the foursomes.

LIEUT. JOSEPH W. CONRAD. Mr. Conrad is only 25, but a veteran of the 1954 Americas Cup Team. A 1952 graduate of North Texas State College and a member of three of its intercollegiate championship teams, he is at present a second lieutenant in the United States Air Force, serving two years of active duty at the Gary Air Force Base, in San Marcos, Texas. His home is in San Antonio, Texas, and he is single.

LIEUT. JOSEPH W. CONRAD

Last year he won the world-wide Air Force Championship and the Southern Amateur Championship for the second year in succession. He held the Trans-Mississippi Amateur Championship in 1953 and was Mexican Amateur Champion in 1950 and Texas Amateur Champion in 1951.

BRUCE H. CUDD. Mr. Cudd is a newcomer to international team competition. He lives in Portland, Ore., is 21 years old and is working his way through the University of Portland, where he is a senior. He is single.



BRUCE H. CUDD

He was a semi-finalist in the USGA Amateur Championship in 1953 and the Western Amateur Champion in 1954. He was Oregon Amateur Champion and runner-up in the Pacific Northwest Amateur Championships in both 1952 and 1953. Last year he was low amateur in the Canadian Open and in the Los Angeles Open, tying for fourth in each event with scores of 285 and 283, respectively.

JAMES G. JACKSON. A member of the 1953 Walker Cup Team, Mr. Jackson is the Trans-Mississippi and the Missouri Amateur Champion. He is a graduate of Washington University, 31 and a salesman. His home is in Glendale, Mo., near St. Louis, and he is married and has two children.

JAMES G. JACKSON

He went to the third round of the USGA Amateur Championship last year and to the fifth round the previous two years. He has compiled a notable record in open stroke play competitions and was leading amateur in the USGA Open Championship of 1952.

In the 1953 Match he played only in foursomes and he and Gene Littler defeated James C. Wilson and Roy C. MacGregor, 3 and 2, after being 3 down playing from the fourth tee. They lost the first hole and then on the second hole Mr. Jackson discovered he had sixteen clubs and his side incurred a penalty of the loss of two holes.

DALE MOREY. Mr. Morey, who was runner-up in the 1953 USGA Amateur Championship, was a member of the 1954 Americas Cup Team, but never has played on a Walker Cup Team. He

DALE MOREY

was graduated from Louisiana State University, where he was a famed basketball player and later a coach. He now lives in Indianapolis, Ind., and is a regional sales manager. He is 34 and married.

Mr. Morey was a quarter-finalist in the last USGA Amateur Championship and enjoyed a particularly fruitful year in 1953. In addition to reaching the final of the USGA Amateur, he won seven tournaments, including the Indianapolis District, Indiana Amateur, Indiana Open and Western Amateur. In each of the previous two years he went to the fourth round of the USGA Amateur Championship and he was Southern Amateur Champion in 1950.

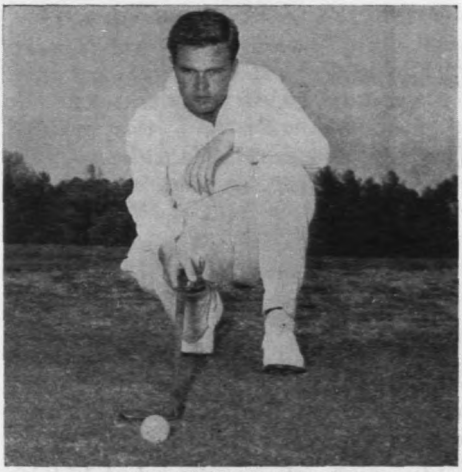
WILLIAM J. PATTON. Mr. Patton captured the fancy of golfers everywhere when he played dramatically to within a stroke of tying Ben Hogan and Sam Snead in the Masters Tournament at Augusta, Ga., last spring. He proved the performance was no fluke by winning the North and South Amateur and finishing first among the amateurs once again in the USGA Open Championship where he tied for sixth at 289. He was graduated from Wake Forest College in 1943, is 33 and a wholesaler of lumber in Morganton, N. C. He is married and has three children.

WILLIAM J. PATTON

In the last USGA Amateur Championship he won two spectacular matches and then lost in the third round. He has won a gold medal for completing 72 holes in each of the last three USGA Open Championships and is the only amateur to have done so.

This will be his first appearance on a Walker Cup Team, but he was second alternate for the last Team and a member of the 1954 Americas Cup Team.

E. HARVIE WARD, JR. Mr. Ward, who holds the Canadian Amateur Championship, is a veteran of the 1953 Walker Cup Team. He won the British Amateur Championship in 1952 and was runner-up in 1953. Although now an automobile salesman in San Francisco, he is a native of Tar-



E. HARVIE WARD, JR.

boro, N. C., and a graduate of the University of North Carolina. He is 29 and married.

Last year he lost in the third round of the USGA Amateur Championship to Frank Stranahan, and he bowed in the fourth round the previous two years. He was a member of the 1952 and 1954 Americas Cup Teams.

In the 1953 Match he defeated Joseph B. Carr, 4 and 3, in the No. 1 singles match, and he and Jack Westland defeated John D. A. Langley and Arthur H. Perowne, 9 and 8, in foursomes.

RICHARD L. YOST. Mr. Yost is a new member of the Walker Cup Team. He is 25 years old, a native of Portland, Ore., an alumnus of the University of Oregon, and now lives in Seattle, Wash.

Army duties limited his participation in 1954 tournaments, but he did find time to serve for the fifth consecutive year as a member of the Pacific Northwest team against California in the Morse Cup Match. In reaching the third round of the California Amateur Championship, he defeated Harvie Ward.

In 1953 he won the Pacific Northwest Amateur Championship, defeating Bruce Cudd in the final, 6 and 5, and won the 6th Army Championship with a 72-hole total of 284 at the Presidio Golf Club, San Francisco.

His record in 1952 included winning the Oregon State Amateur Medal Play Championship (score: 274), and the Pendleton Open (score: 272, which was five strokes under Bud Ward, low professional). He was a quarter-finalist in the USGA Amateur Championship, defeating William J. Patton and Edward Meister, Jr., among others before losing to Jack Westland, the eventual Champion, and was runner-up in the Northwest Open with a score of 270.

Treat your caddie as you would your son.

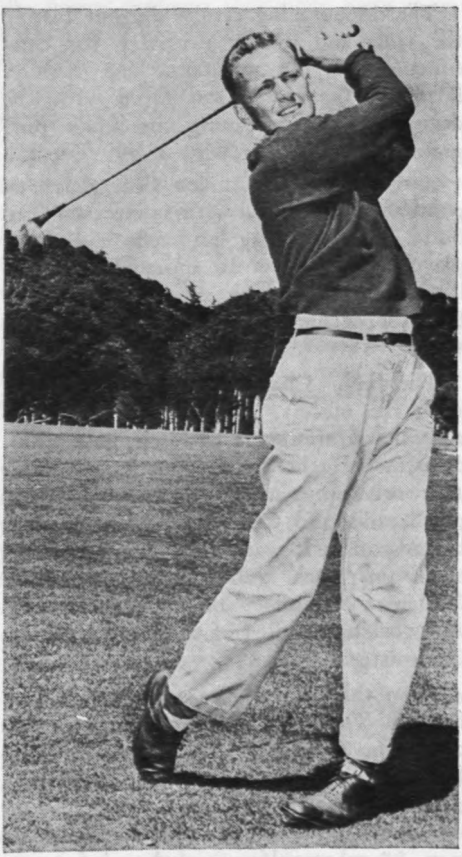
NEW MEMBERS OF THE USGA

Regular

Colonial Country Club, Miss.
Denver City Country Club, Texas
Glenwood Golf Association, Va.
Highland Country Club, Ga.
Highland Country Club, N. C.
Hillcrest Golf and Country Club, Okla.
Hocking Hills Country Club, Ohio
Meadowlake Country Club, Texas
North Ridge Women's Golf Club, Cal.
Sunkist Country Club, Miss.
Tascosa Country Club, Texas
Twin City Country Club, Minn.
Guantanamo Bay Golf Club, Cuba
(U. S. Naval Base)

Associate

Candlewood Lake Club, Conn.
Duke University Golf Course, N. C.
Idaho Falls Golf Club, Idaho
Minnetonka Country Club, Minn.



RICHARD L. YOST

A JUNIOR PROGRAM THAT LASTS ALL YEAR

by

DAVID B. LAWRENCE

President, New Orleans Golf Association

REALIZING THE NEED to stimulate the interest of junior golfers, the New Orleans Golf Association launched a junior program in 1951, consisting of six tournaments. The response was not very gratifying, with only 45 to 50 boys participating. This same program was continued in 1952 and 1953, with results that became more and more discouraging. No new faces were appearing. Participation dropped to around 32 at each tournament.

The discouraging results did not justify the time and money necessary for continuance of the program. The NOGA Board of Governors was faced with the decision of discontinuing the junior program or finding out why it had failed.

A Chairman of Junior Golf was appointed. He realized it was necessary to build interest among boys who had never played golf before. It appeared that the high and junior high schools offered the best opportunity for this promotional work.

The Junior Chairman discussed his plans with the officers, members of the board and the professional of each golf club, directors of athletics for public, parochial and private schools, representatives of press, radio and television, and prominent business men. It was found that all would cooperate. Each golf club appointed a Chairman of Junior Golf for the club and as a working member of the NOGA Junior Committee.

From this nucleus the organization was formed. Two men were chosen as vice-chairmen, and each was made responsible for two major programs. The remaining eight men were appointed chairmen of sub-committees. In addition to these 10 men, 38 other golfers agreed to help.

At a meeting of the entire Junior Committee, a comprehensive program was agreed upon. An organization chart, a complete detail of functions of each sub-committee and a list of the entire committee, with addresses and telephone numbers, was given to each man.

After each sub-committee had laid its plans, a meeting of the working committee (the two vice-chairmen and chairmen of the eight sub-committees) was called. The representative of each golf club was requested to have his club donate $100 toward the junior program, confirm the dates set for junior tournaments to be held at his club, and obtain permission for juniors to play without charge on certain designated days.

A program was printed in the form of posters and mailing pieces, announcing the dates of all tournaments, a Father and Son Banquet, the day of the week each golf course was open without charge to the juniors, the dates of 30 golf clinics, and names and telephone numbers of every man on the Junior Committee. Two posters were placed in the locker room and on the main bulletin board at each golf club, junior high school and high school in the city.

Key To Success

The key to our success was found in this program. Contacts were made with the principals and the coaches of the 34 high and junior high schools. The program was explained and a request was made to put on a golf clinic at their schools. It was difficult to "sell" the idea to some schools, but half of the battle was won when the Director of Athletics for the School Board was in complete accord with what we were attempting.

Six teams, each consisting of a professional and an outstanding amateur, were organized from the Junior Committee, and each team conducted clinics at six schools. Portable nets were purchased, and the clinics covered golf etiquette, major rules of golf, how to hit various shots, and the announcement of the Junior Program. The juniors were permitted to hit the ball several times, and then each boy interested was asked to sign his name, address, telephone number, date of birth and grade in school. This procedure produced the names of 500 boys to whom the printed program was sent.

The Interscholastic Meet became known as the Joe Gumbel Tournament in memory of the man who gave so much time to the promotion of golf and the advancement of youth in New Orleans.

Competition For Everybody

The Interscholastic Meet was a huge success. More than 100 boys participated. It was conducted as follows:

1. Two separate divisions according to grades; no one boy could play in both. The Junior High School Division was made up of boys in the seventh, eighth and ninth grades. The High School Division was composed of boys in the tenth, eleventh and twelfth grades.

2. Schools having both junior and high school grades were permitted entries in each division. Seventh, eighth and ninth-grade boys were permitted in the High School Division for team play.

3. Each school could enter as many contestants in each division as desired.

4. Eighteen holes of stroke play were held on a Saturday morning in April, and 18 holes on the next Saturday morning.

5. The four boys having the lowest medal scores for 36 holes from each school in each division were designated as the team from that school. The team having the lowest combined score was the winner.

6. All participants were then placed in flights of 16 in each division, and match play was conducted the following two Saturday mornings and Sunday afternoons.

A Winter Program consisted of a Father and Son Banquet in October, a blind hole handicap tournament the day after Thanksgiving, and a 36-hole medal handicap between Christmas and New Year's. Merchandise gift certificates were awarded.

Father and Son Banquet

Each boy who participated in any NOGA Junior event during the year was invited, with his father or guardian, to be guests of NOGA at a Father and Son Banquet. Two hundred ninety junior golfers and their fathers enjoyed one of the finest banquets we have ever had. There were moving pictures, in color, of the boys at the Interscholastic Meet and the City Junior Championship.

Many factors contributed to success of the junior program, but none were more important than proper supervision at tournaments, record-keeping, and use of the telephone in reminding each boy of tournaments.

The program has required much time and energy, but the results have been rewarding. Two hundred thirty-five boys have participated, at ages ranging from 8 to 18. We had fewer than 50 Junior Golfers at the beginning of 1954, and we now have close to 300. Of the 25 boys who played in every tournament, only two failed to win a trophy. Another 25 boys played in every tournament except one.

We are proud of the fine youngsters who have taken part. Not one "incident" occurred, and their sportsmanship is a pleasure to see. There was only one default in the full seven flights in the City Junior Championship—and that boy 'phoned in to say he was ill. A copy of golf rules and etiquette has been given to each boy and they are now very rule-conscious.

It is a privilege to watch the progress these boys are making, not only in improvement of their game but also in self-control, courtesy and perseverance. There is no sport more worthy of leadership, no sport where early training and participation bring such lasting enjoyment.

DO YOU KNOW YOUR GOLF?

Answers to questions below will be found on page 19.
Scoring: All answers right: par 35. For each answer wrong: add 5 to 35.

Score

1. The first woman golfer of note was:

   _____(a) Miss F. Hume M'Leod
   _____(b) Miss A. Boothby
   _____(c) Mary, Queen of Scots
   _____(d) Miss Mary Lamb _____

2. Since 1900 the out of bounds penalty has been changed:

   _____(a) Once
   _____(b) Twice
   _____(c) Three times
   _____(d) Four times _____

3. There have been how many occasions on which players of the same club have been members of the U. S. Walker Cup Team?

   _____(a) Once
   _____(b) Twice
   _____(c) Four times
   _____(d) Six times _____

4. Had the diameter of the hole been standardized at 4¼ inches by the time the USGA was organized in 1894?

   _____Yes _____No _____

5. "A" and "B" are playing a 137-yard hole. "A's" shot caroms off a tree some 100 yards distant and he loses sight of the ball. "B's" ball strikes the same tree and he does not see it drop. After looking for the balls for the statutory time, both players return to the tee and play second shots. Upon reaching the putting green, "A's" ball is discovered in the cup and "B's" ball is found near the edge of the putting green. Should either of the original balls be considered lost?

   _____Yes _____No _____

6. A player in stroke play hits the ball into the hole while the flagstick is in the hole and attended. The ball stays in the hole. Does the player incur a two-stroke penalty?

   _____Yes _____No _____

7. When a player is taking his stance under a tree with overhanging branches, is his caddie allowed to hold a branch back without breaking the branch?

   _____Yes _____No _____

USGA GOLF MUSEUM AND LIBRARY

The USGA has received inquiry as to whether there is any connection between the USGA Golf Museum and Library in "Golf House", New York City, and plans announced by other groups for collections of golf items at Yonkers, N. Y., and Foxburg, Pa.

The USGA Golf Museum and Library in "Golf House" is the official home of the United States Golf Association collection of historical golf material. It has no connection with either of the other projects in question.

The USGA collection was started in 1936 and now occupies most of three floors in "Golf House." Visitors are most welcome.

SCORE FOR EVERY ROUND

(*Continued from page 10*)

On the other hand, if a player turns in only his poorer scores, his handicap, computed from a percentage of these poorer scores, will be too high, will give him an unfair advantage over his fellow players, and will leave him open to censure and a reputation for poor sportsmanship.

So it is plain to see that every player, to be honest with himself, as well as with his fellow members, must make it a point to turn in or post a score every time he plays an 18-hole round of golf, whether that score be a good one or a bad one, and the sooner every player is informed of, and made to comply with, this requirement the sooner the handicap system will produce the equitable handicaps it was designed to produce.

Proper Facilities Urged

Clubs are encouraged to provide facilities which will make it as easy as possible for their members to report or record every score. If your club does not provide these facilities, get together with a few other members and make an urgent request to your golf or handicap committee for them. Correct and complete handicap records are much more important than many other golf club functions and should receive the attention, time and funds necessary to promote the very thing that contributes most towards perpetuating a club's existence. Golf is the lifeblood of your club and equitable handicapping is the lifeblood of golf.

Good handicapping, meaning handicaps fair to all, requires the cooperation of every player, handicapper, handicap committee, club and golf association throughout the country. So let's get on the ball and see to it that every player turns in

A SCORE FOR EVERY ROUND.

The Gallant Golfer

It intrigues us that the following poem was brought to our attention once again recently, not by a literary agent, but by Bobby Reith, son of the junior professional at the Minikahda Club, in Minneapolis, Minn.:

Please note the gallant golfer, as from tee to green he hies;
For fun or doctor's orders, he is taking exercise.
His head he carries rather high, one club that made the stroke,
He also carries matches, in case he wants a smoke.
And with the gallant golfer, as he wanders west and east,
There trudges forth a skinny kid, who's burdened like a beast.
The lad, who seeks no exercise but just his caddie fees,
Goes carting total tonnage that would spring a pack-mule's knees.
The golfer gay who goes his way, a-watching of the ball,
May have the fun, but exercise? The caddie gets it all.

John Kieran

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The New York Times by permission

DO YOU KNOW YOUR GOLF?

(Answers to questions on page 18)

1. (c) Mary, Queen of Scots
2. (c) Three times. 1920, 1947, 1952.
3. (d) Six times. 1922, 1924, 1926, 1928, 1949, 1955.
4. Yes.
5. Yes. "B's" ball should be considered lost. "A" holed in one.
6. Yes. See Rule 34-3.
7. No. See Rule 17-3.

THE REFEREE

Decisions by the Rules of Golf Committees

Example of symbols: "USGA" indicates decision by the United States Golf Association. "R & A" indicates decision by the Royal and Ancient Golf Club of St. Andrews, Scotland. "55-1" means the first decision issued in 1955. "D" means definition. "R. 37-7" refers to Section 7 of Rule 37 in the 1955 Rules of Golf.

Removing Spanish Moss

USGA 55-1
D. 17; R. 17-3; 18; 32-1

Q.1: Can you remove Spanish moss from trees that might be in your way? Is it considered fixed or growing?

A.1: We understand that trees are the natural habitat of Spanish moss. Rule 17-3 would prohibit removing it from the line of play.

We would regard such moss fallen to the ground as a loose impediment (Definition 17 and Rule 18).

Ball In Salamander Mound

Q.2: Is relief given for balls that come to rest in salamander mounds? How about salamander mounds that have been raked out but still leave the residue of sand?

A.2: Rule 32-1 gives relief from a mound made by a salamander or from such part of a mound as has not been completely eliminated by raking.

Questions by: IRVIN E. SCHLOSS
DUNEDIN, FLA.

Attending the Flag

USGA 55-2
R. 34-3

Q: In stroke play, if a fellow-competitor is approaching the green within or beyond the twenty-yard distance of the hole, can the competitor demand that the flag be attended or removed?

Question by: G. PEXIE DUPUY
LAKE CHARLES, LA.

A: No.

In stroke play, the competitor playing the stroke controls the flagstick at all times, and he may have his caddie attend it or leave it unattended, subject to the risk of penalty imposed by Rule 34-3.

Error In Handicap

USGA 55-3

Q: In a stroke play competition, a player's handicap is posted as 17. The player wins low net by a margin of one stroke.

Several days later the Committee discovers that, through its own error, the player's handicap should have been 16. The player was not at fault.

May the Committee correct its error several days after the event and retract the prize awarded to the player?

Question by: MRS. J. JOSEPH CONNOR
RED BANK, N. J.

A: Yes.

If a Committee has erred in computing or posting a handicap and a remedy is feasible, the Committee should correct its error.

In stroke play there is no time limit for the Committee to apply a Rule if the facts warrant.

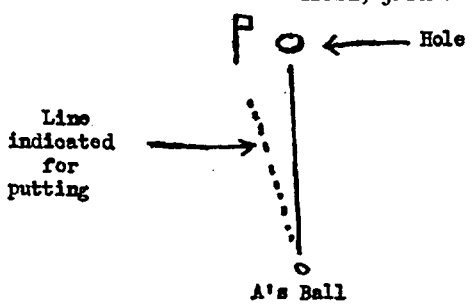
The matter is up to the judgment of the Committee; its objective should be fair play for the entire field.

Caddie Indicates Line for Putting

USGA 55-9
Rule 35-1c

Q: In match play, A's caddie was attending the flagstick, and indicated the direction for putting by placing the flagstick on the green about one foot to the side of the hole. As it was a sloping green, the spot of its placement was not actually on the line of putting, but a point to indicate where to aim. The caddie lifted the flagstick immediately, and thereafter A putted. Thereupon B claimed the hole under Rule 35-1c. Was B's claim valid?

Question by: S. TAKAHATA
KOBE, JAPAN



A: B's claim was valid. When A's caddie touched the flagstick to the ground, the line of putt was touched to the side of the hole, in violation of Rule 35-1c.

The line of putt is not necessarily a straight line from ball to hole. The slope of the ground and possible error in executing the stroke must be considered.

One object of Rule 35-1c is to prevent improving the putting surface, as might be done by touching any possible line of putt; it is for this reason that the Rule applies to touching any area of the putting green over which the ball might possibly travel. Another object of the Rule is to prevent making a more or less permanent mark to assist in putting.

Local Rule Conflicts With Rules of Golf

USGA 55-6
R. 11-3, 20-1, 35-2b, 35-3a, 36-7

Q: A question has arisen concerning the making of rules by a Green Committee. The Committee is planning to make a rule as follows . . .

> It will be mandatory for a player to putt out completely. A player who is farthest away from the hole on the putting green must putt first and then no matter where he finishes must complete the hole.

It is my contention that the player away should putt first. The man who made the first putt may finish slightly closer to the hole than the opponent and then in completing the next putt may help and assist the competitor in showing the line, roll of the green and the way he may play. Sometimes it will make the opponent go all out for the putt because he knows he must make it, or he may play safe, as is required.

The Rules of Golf call for the man furthest away to play first. I say play the Rules and make as few changes as possible in your local rules. I know it is advocated to complete play as fast as possible, but the proposed local rule will cause many arguments.

If any arguments are started and the USGA is needed for a decision, will they make a decision when the rule is against the Rules of Golf?

Question by: MAXWELL HEYMANN
BROOKLYN, N. Y.

A: The proposed local rule conflicts with Rules 20-1, 35-2b in match play and 35-3a in stroke play, and cannot be authorized under Rule 36-7. The USGA will not interpret such a local rule—see Rule 11-3. For three-ball, best-ball and four-ball match play, see Rules 40-1b, 40-1d and 40-3a. For four-ball stroke play, see Rules 41-2a and 41-5.

Legitimate Hole-in-One?

USGA 55-4
Misc.; D. 18, 29

Q: A question has arisen concerning a hole-in-one. One player had this good fortune while practicing, with a caddie as the only witness, and another while playing only nine holes. We wonder in cases such as this if full credit can be given.

Question by: MRS. J. B. REINHART, JR.
WEBSTER GROVES, MO.

A: Each case should be determined by the local Committee as it can best ascertain the facts. Would the Committee accept the score for its own handicap purposes? We offer the following comments:

1. If the first case were a practice round in which more than one ball was in play at a time, we would not think the score acceptable. If it were a normal round played under the Rules of Golf, we see no reason not to accept the score provided the Committee permits caddies to serve as markers (Definition 8).

2. As a stipulated round of 18 holes was not played (see Definition 29), we would not consider the score acceptable.

Device For Measuring Shots

USGA 55-5
R. 37-7

Q: Will you please send me your ruling on meters for measuring the distance of shots that some players have attached to their golf carts?

Question by: MRS. GEORGE B. PACE
LA CANADA, CALIF.

A: The Rules of Golf do not preclude the use of artificial devices to assist a player in estimating distance. However, the player would be subject to the application of Rule 37-7 if his use of a measuring device were to result in any delay of play.

Ball Moving; Relief From Obstruction

USGA 55-8
D. 1, 20, R. 25-1, 27-1d, 31-2

Q.1: Player takes his stance in preparation for making a stroke. During his backswing the ball starts moving or is moving. He does not stop the swing, but continues his swing, striking the ball and hitting it on to the green. Is there a penalty?

A.1: There is no penalty under Rule 25-1 as the ball began to move only after the player had begun his backswing. However, if he had addressed the ball he sustained a penalty of one stroke under Rule 27-1d. Under Definition 1, "address" comprises taking the stance and, except in a hazard, grounding the club also.

Q.2: A line of utility poles are on our course with cables anchored in the ground to brace the poles. Has a player any relief if these poles or cable lines interfere with his stroke?

A.2: Yes. Such poles and cables are obstructions (see Defintion 20), and a player is entitled to relief within the limits set forth in Rule 31-2.

Questions by: LEONARD OTT
CORAL GABLES, FLA.

Clubhouse Is Obstruction

USGA 54-29
D. 20; R. 31-1, 33-1f and g

Q.1: What is the ruling on a ball coming to rest against the foundation of our clubhouse, which is parallel to the 16th fairway?

A.1: The player is entitled to relief under Rule 31-1. See also Definition 20. However, many clubs make their clubhouses out of bounds.

Player Falls, Touches Hazard

Q.2: What is the ruling when a player slips and falls in a water hazard and his hand and club touch the hazard?

A.2: It is assumed that the ball lay in the water hazard. There is no penalty if nothing was done which might have improved the lie of the ball or constituted testing the hazard or assisted the player in his subsequent play of the hole. See the principles of Rule 33-1f and g.

Questions by: ARNOLD BROWNING
HUNTINGTON, W. VA.

FURTHER EXPANSION OF TURF SERVICE

by

T. R. GARLINGTON

Chairman, USGA Green Section Committee

THE USGA Green Section's Regional Turf Service is being further expanded this month with activation of the Mid-Atlantic Region. Charles K. Hallowell, of Philadelphia, has joined the Green Section staff as Mid-Atlantic Regional Director, upon his retirement as Philadelphia's first and only County Agricultural Agent.

From the Green Section office at Beltsville, Md., he will make the Regional Turf Service available to USGA member clubs in Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia and West Virginia.

The Service provides information about scientific golf course management, mainly through periodic visits by the USGA Regional Directors to individual courses and in small group meetings with golf course superintendents. Each individual visit is supplemented by a written report from the USGA scientist to the club. In addition, each Regional Office issues a Turfletter six times a year dealing with turfgrass matters in its particular Region.

The Service is subscribed to by USGA member clubs and courses at annual fees, which cover all work and expenses and are based on estimated cost. The annual fee for an 18-hole course is $100; for nine holes, $75. There are no extra charges for travel.

The USGA Executive Committee considers the Regional Turf Service to be of prime importance to the member clubs. The 5,147 courses in the United States spend an estimated $75,000,000 on course maintenance.

The Regional Turf Service is now available to USGA clubs in 35 states and the District of Columbia through five Green Section offices. Besides the Mid-Atlantic Region, the offices and their Regional Directors are:

Northeastern Office, College of Agriculture, Rutgers University, New Brunswick, N. J.—Alexander M. Radko, Northeastern Director:

CONNECTICUT	NEW JERSEY
MAINE	NEW YORK
MASSACHUSETTS	RHODE ISLAND
NEW HAMPSHIRE	VERMONT

Southeastern Office, Georgia Coastal Plain Experiment Station, Tifton, Ga.—B. P. Robinson, Southeastern Director:

ALABAMA	MISSISSIPPI
FLORIDA	NORTH CAROLINA
GEORGIA	SOUTH CAROLINA
LOUISIANA	TENNESSEE

Southwestern Office, Texas A & M College, College Station, Texas—Dr. Marvin H. Ferguson, Southwestern Director and National Research Coordinator:

ARKANSAS	NEW MEXICO
KANSAS	OKLAHOMA
MISSOURI	TEXAS

Western Office, Davis, Cal.—Charles G. Wilson, Western Director:

ARIZONA	NEVADA
CALIFORNIA	OREGON
COLORADO	UTAH
IDAHO	WASHINGTON

William H. Bengeyfield, agronomist, is attached to the Mid-Atlantic Office at Beltsville, Md., in the Bureau of Plant Industry of the United States Department of Agriculture.

About Charles K. Hallowell

Charles K. Hallowell, the new Mid-Atlantic Regional Director, was graduated from Pennsylvania State College in 1917. He was Philadelphia's County Agricultural Agent from 1923 until his recent retirement and has had varied experience with turf—on golf courses, football fields, lawns and polo fields.

He has been a regular contributor of articles on turf to national publications. From May through October he prepared "Turf Topics" monthly for the Philadelphia Association of Golf Course Superintendents.

In 1950 during a six months' leave he served as Associate Professor in Horticulture at the University of California at Los Angeles, where he directed a cooperative project consisting of meetings of Southern California Golf Association groups.

Mr. Hallowell lives in Huntingdon Valley, Pa., is President of the Huntingdon Valley Savings and Loan Association, and a member of the Board of Managers of Friends Hospital and of the Grandom Institution.

CHARLES K. HALLOWELL

TURF MANAGEMENT

The book "Turf Management," sponsored by the United States Golf Association and edited by Prof. H. B. Musser, is a complete and authoritative guide in the practical development of golf-course turfs.

This 354-page volume is available through the USGA, 40 East 38th Street, New York 16, N. Y., the USGA Green Section Regional Offices, the McGraw-Hill Book Co., 350 West 42nd Street, New York 36, N. Y., or local bookstores. The cost is $7.

You can't help a little child up the hill without getting nearer the top yourself.

THE GREEN SECTION RESEARCH PROGRAM

By MARVIN H. FERGUSON

Southwestern Director and National Research Coordinator, USGA Green Section

HOW DO WE STAND now with respect to turf research efforts? In 1953 the Green Section embarked upon a plan of operation that emphasized direct service to USGA member clubs. There were many who feared that the research interests of the Green Section would suffer when direct service became the major function of Green Section staff members. Those who held misgivings had come to appreciate the research efforts of the Green Section at Beltsville and at stations where cooperative work was in progress. There is much evidence to show that in the past thirty years the Green Section contributed greatly to the improvement of turf on golf courses through its research.

In 1955—just two years after the new plan was inaugurated—the Green Section is sponsoring the most extensive research program in its history. This research is not being done by Green Section staff members. It is being done by state institutions which have accepted grants-in-aid from the Green Section for the support of various investigations aimed at the solution of specific turf management problems. All of the money set aside for research is spent in direct support of those investigations. In 1955 the Green Section proposes to distribute a total of $24,980 in the form of grants-in-aid.

The establishment of Regional Offices in support of the direct service plan has helped Green Section turf research efforts. Regional Directors are able to be better informed concerning the major problems in various parts of the country. In turn the Regional Directors are able to maintain closer liaison with experiment stations which are the source of new developments. Results of research can be evaluated under conditions more nearly like those which prevail on the golf courses in the various regions.

Turfgrass investigations, supported by Green Section grants-in-aid, really are a small part of the total research effort in the field of turf management. This is as it should be. Golf courses use only a small portion of the turf in the nation. Management of all turf rests upon certain principles, however, so that in reality all fundamental investigations provide useful information for all types of turf. With this concept in mind, the Green Section has sought to use its funds to encourage studies that would complement the research being done at experiment stations, fill gaps in our knowledge, and studies which would provide answers to problems peculiar to golf course turf.

Sources of Funds

The Research and Education Fund which has recently been incorporated has provided a great deal of the money for support of research. This fund has been replenished in a gratifying manner by the many individuals and firms who wish to have a hand in the furtherance of studies in turf management.

National Golf Day has contributed handsomely to turf research. From proceeds of National Golf Day, 1954, the Directors of National Golf Fund, Inc. allocated $10,700 for distribution by the Green Section. National Golf Day is sponsored by Life Magazine and the Professional Golfers' Association in cooperation with the USGA. Proceeds are used for various worthy causes related to golf. This year National Golf Day will be June 4. The two current Open Champions will match scores with thousands of golfers

who will play at their home courses. Ed Furgol is Open Champion and Mrs. Babe Zaharias is Women's Open Champion.

Still another source of money for research has been a portion of the Regional Turf Service fees. Thus subscribers to Regional Turf Service not only received the benefits of direct service, but they contributed toward the development of additional information. From now on the USGA will make allocations to research from general funds rather than specifically from Regional Turf Service fees.

The accompanying lists of research projects showing studies supported in 1954 and those proposed for 1955 indicate the kind and scope of the investigations sponsored by the Green Section.

Results of some of these studies are already becoming available. As the fund of information grows, it will be distributed to USGA members through the pages of the Journal and to Regional Turf Service subscribers through direct contacts and through the Regional Turfletters.

Your Green Section is sponsoring more research than ever before and through its Regional Turf Service it is well equipped to get the newly developed information into practice in a very short time.

USGA Research Grants — 1954

Institution	*Amount of Grant*	*Duration*	*Purpose of Grant*
Colorado A. & M.	$ 300	1 yr.	Establishment of turfgrass plots.
Cornell	600	2 yrs.	Studies of seed mixtures.
Texas A. & M.	2,000	1 yr.	Partial support of fellowship concerned with a study of physical properties of putting green soils.
Rutgers	2,000	1 yr.	Support of fellowship concerned with thatch formation and control studies.
Rutgers	1,000	1 yr.	Support of general turf research program.
Kansas State College	600	2 yrs.	Evaluation of grasses for arid regions.
U. of California (Davis)	1,000	2 yrs.	Irrigation studies.
U. of California (Davis)	250	1 yr.	Merion bluegrass seed production studies.
U. of California (Los Angeles)	300	1 yr.	Soil amendment studies.
Purdue University	1,000	2 yrs.	Bluegrass selection and study for disease resistance.
U. of Illinois	1,000	2 yrs.	Fundamental physiological and life history studies of *Poa annua*.
Ga. Coastal Plain Exp. Sta.	5,000	1 yr.	General support of turf research program.
Oregon State College	500	1 yr.	Development of seed supplies of *Poa annua* and *Poa bulbosa*.
Michigan State College	300	1 yr.	Combined with other funds.
Penn. State University	1,800	1 yr.	Fellowship study.
Florida Agr. Exp. Sta.	500	1 yr.	Nitrogen studies on selected Bermudagrass strains.
Rhode Island University	300	1 yr.	Zoysia-bluegrass compatibility studies.
Total, 1954	$18,450		

Additionally, 20% of Regional Turf Service fees in southern California retained there for research.

USGA Research Grants — 1955
(Proposed)

Institution	*Amount of Grant*	*Duration*	*Purpose of Grant*
Colorado A. & M.	$1,000[1]	1 yr.	Scholarship and Plot Work.
Texas A. & M.	2,000[1]	1 yr.	Conclusion of soil study.
Rutgers	2,000[1]	1 yr.	Conclusion of thatch study.
Rutgers	1,080	1 yr.	General support of turf research.
Kansas State College	1,000[1]	1 yr.	Evaluation of species under arid conditions.
U. of California (Davis)	2,000[2]	1 yr.	Support of fellowship.
U. of California (Davis)	250	1 yr.	Merion bluegrass seed production study.
Purdue University	2,000[1]	1 yr.	To be determined.
Ga. Coastal Plain Exp. Station	1,000[1]	1 yr.	General support of turf work.
Ga. Coastal Plain Exp. Station	4,000	1 yr.	General support of turf work.
Rhode Island University	1,700	1 yr.	*Poa annua* control study (fellowship).
Rhode Island University	1,350	1 yr.	General Support of Turf Research.
Penn. State University	1,800	1 yr.	Study of 2,4-D effects on grasses.
U.S. Dept. of Agr. (Beltsville)	1,000	1 yr.	Herbicide screening.
Florida University	1,500	1 yr.	Nematode study (fellowship).
UCLA	300	1 yr.	Study of soil amendments.
Oklahoma A. & M.	500	1 yr.	Collection and evaluation of bentgrass strains.
Western Washington Exp. Sta. (Puyallup)	500	1 yr.	To be determined.
Total, 1955	$24,980		

Additionally, 20% of Regional Turf Service fees in southern California retained there for research.

[1]National Golf Fund Allocation.

[2]$1,700 from National Golf Fund.
300 from Research and Education Fund.

MERION BLUEGRASS SEED PRODUCTION

Merion Bluegrass, a naturally occurring selection of common Kentucky bluegrass, has proved to be a superior turfgrass in many areas of the United States. Demand for Merion Bluegrass seed has created considerable interest in its production among some California seed growers and it is being tested and evaluated by the University of California as a seed crop for that state. The following is a progress report of these tests by the University of California, College of Agriculture, Department of Agronomy, Davis, Cal., dated January 11, 1955, supported in part by the United States Golf Association Green Section.

D C. Sumner, Associate Specialist in Agronomy.
Dr. R. M. Hagan, Associate Irrigationist in Irrigation.
Dr. D. S. Mikkelsen, Assistant Agronomist in Agronomy.

THERE HAS BEEN no experimental work to determine the best soil types for maximum seed production of Merion. A number of trial plantings by farmers in various areas of the lower Sacramento Valley suggest that the more easily worked soils are to be preferred. The possibilities of production on clay soils have not been adequately explored. Soils that are in poor physical condition and have low water penetration capabilities should be avoided.

Growth Habits

Merion Bluegrass is a perennial sod-forming grass that spreads by underground

rhizomes. Formation and growth of these rhizomes appear to be most active during the warmer portions of the year. New shoots originating from above-ground portions of the plant seem to develop more actively during the spring and fall. As fall approaches, with cooler weather and shorter days, the terminal ends of the rhizomes and rhizome branches turn upward and start to emerge from the soil surface. On loamy type soils, rhizomes have been seen emerging from the soil at distances up to 17 inches from a parent plant. Rhizomes from crowns of plants growing in heavy, compacted soils with dry surfaces seem to encounter difficulty and produce short, stunted growth.

Tests indicate that new growth originating from shoots and rhizomes should be encouraged for seed production. Under no circumstances should this new growth be interrupted by such management practices as clipping or grazing. Clipping trials for the 1953-54 season indicate that fall clipping reduces seed yields—clipping after the latter part of October reduced yields by as much as two-thirds.

Time of Seeding

A combination of short days and low temperatures has been shown to be necessary for flower initiation.[1] Results of tests at Davis suggest that new plant material originating after approximately the early part of November does not produce flowering tissue the same crop year. Plant material originating in the late fall, but before early November, produced some seed heads, but so few in number and so small in size that they were of doubtful value as a seed crop.

These studies would indicate that to obtain the maximum seed possible under the climatic conditions at Davis the plants should be encouraged, by proper irrigation and fertilization, to go into the fall period with the maximum possible vegetative growth.

Field seedings made as late as November generally will produce little or no seed the following spring. Established plants from late fall seeding must be carried through the next winter, with a seed crop expected the second spring from time of seeding. Seeding trials indicate that plants started in the field by at least the first of September and grown under good moisture and soil fertility conditions will produce a reasonable seed crop the following May or June. Such an early seeding may produce enough seed the first year to compensate for the first year's operational costs.

Experimental work is now underway to determine how soil surface temperatures affect germination for mid- and late-summer seedings. Seedling emergence from winter and early spring seedings usually takes 20-26 days. Seedings made August 18 required seven days to emerge when planted not more than one-quarter inch deep on shallow beds kept moist by furrow irrigation.

Bluegrass seed is very small—about 2,177,000 seeds per pound. Because of this bluegrass should be drilled as close to the surface as possible. Planting studies[2] indicate that emergence of Kentucky Bluegrass from a heavy silt loam is 56 per cent when seeded on the surface, 46 per cent when placed one-half inch deep, and 9 per cent when placed one inch deep. There was no emergence when planted two inches deep or more. It appears that a planting depth of one-quarter inch or less would be the most desirable. Tests at Davis using seed with a laboratory germination of 83 per cent and seeded August 18, 1954,

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[1] *Effects of Photoperiod and Temperature on Growth and Flowering of Kentucky Bluegrass.* *M. L. Peterson and W. E. Loomis* *Plant Physiology, Vol. 24, No. 1, pp. 31-43, 1949.*

[2] *The Emergence of Grass and Legume Seedlings Planted at Different Depths in Five Types of Soil.* *R. P. Murphy and A. C. Arny* *Jour. Am. Soc. Agro. 31:17-28, 1939.*

Treat your caddie as you would your son.

at one-quarter inch deep gave a germination of 78 per cent. The final count was made 15 days after emergence.

One pound of seed per acre, when seeded in September on a well-worked fine seedbed with good control of irrigation water, should produce an excellent stand. In 30-inch rows, a pound of seed per acre will give approximately 124 seeds per linear foot of row. Constant, even distribution of seed in the row is essential. Observations indicate that fall or winter seedings with a longer emergence interval may require a heavier seeding rate. Seed treatment to control loss from soil fungi is highly desirable; however, manufacturers' recommendations should be followed carefully.

Seed Formation in Bluegrass

Common Kentucky Bluegrass is made up of a very large population of individuals having generally the same major characteristics. Within this population it is possible to find individuals that, because of a particular chance combination of genes, exhibit one or more characteristics considerably different from the rest of the population. Merion Bluegrass is the result of one of these chance variations.

The normal process of fertilization does not occur 100 per cent in Bluegrass. Pollination takes places and is necessary for the formation of the endosperm, but fertilization is not always accomplished. Before fertilization can take place many of the macrospores disintegrate and the embryo sac develops from a cell of the nucellus having the same genetic composition as the mother plant. Plants produced by this type of seed will be identical genetically with the parent plant. This process, known as apomixis, is responsible for the retention of desirable characteristics in a strain or selection such as Merion. The degree of apomixis among strains and selections of bluegrass varies from approximately 60—to almost 100 per cent, the rest of the seed being produced by fertilization. The degree of apomixis in Merion is not as yet known, however, there are indications that it must be quite high. The off-type plants produced by fertilized seed are not Merion and should be removed from the seed field by roguing. Many of these off-type plants are stunted, slow growing, and weak. When mature, they produce a small, short, compact type of panicle. It has been suggested that most of these types will not survive under competition. It is possible that some off-types resemble Merion so closely that they are indistinguishable. Other off-types grow more rapidly and taller than Merion, producing typical Kentucky Bluegrass panicles.

In the fall of 1953, 9,771 single plants grown from breeder's seed were transplanted to the field and kept under close observation. In June, 1954, 80 of these plants were removed from the field because they produced a type of growth different from Merion. None of these 80 plants exhibited Kentucky Bluegrass characteristics; they were even much shorter and slower growing than Merion, with much more compact and shorter panicles. This first year's observation would indicate that apomixis in Merion is rather high, since only .81 per cent appeared to be off-types.

With practice and careful examination, Merion Bluegrass seed can be distinguished from common Kentucky Bluegrass. Generally Merion seed are shorter, plumper, and with the mid-nerves on the lemma less prominent. In examining seed, however, there are many borderline cases.

To check the amount of common bluegrass that may be found in commercial Merion, three lots of seed from retail outlets were examined. The results listed on the following page indicate that there can be a large amount of Kentucky Bluegrass type seed in commercial Merion, and that positive visual identification in separating these seeds is difficult, at least by the author.

These observations would suggest the possibility that plantings made from a carefully selected and proven pure seed

source should contain few, if any, Kentucky Bluegrass types. The above observations may also suggest that seed fields containing a large population of plants resembling common Kentucky Bluegrass may have been the result of mechanical mixtures with common bluegrass.

Lot No.	*Visually determined as off-type or Kentucky Bluegrass seed (% by wt.)*	*Variants appearing from planting visually determined Merion type seed (% by number)*	*Merion types* appearing from planting of variant or Kentucky Bluegrass type seed (% by number)*
3	1.18	6.6	33.3**
4	3.57	13.0	4.1
5	5.21	6.2	22.9

*These *appeared* to be Merion, however some, genetically, may have been variants.

**Only three seeds germinated; two expired before maturing, and the remaining was of the Merion type.

Irrigation and Fertilization

The Department of Irrigation cooperated in the studies during the 1953 season by using its Merion turf plots for seed production. Three irrigation treatments were maintained: wet—irrigated while the soil was near field capacity; intermediate—irrigated when about half the available soil moisture was used; and dry—irrigated when the grass showed signs of wilting. Low and high fertility plots, with and without added nitrogen, were superimposed on irrigation treatments. The plots with the highest nitrogen level and most frequently irrigated yielded the longest tillers and had the largest seed heads. Tiller and head size decreased with a decrease in the nitrogen level and frequency of water application.

Commercial seed was used in these plots, which contained variants other than Merion. During the previous year, these turf plots had been kept mowed to three heights —½ inch, ¾ inch, and 1½ inches. The low nitrogen plots to which no nitrogen was added and previously kept ½ inch high contained the least number of off-type or Kentucky Bluegrass type panicles. The highest number of off-type, or Kentucky Bluegrass type, panicles was produced on the previously high nitrogen plots to which more nitrogen was added.

Previously low nitrogen plots + No added "N" = 1.7% variant type panicles.
Previously low nitrogen plots + 80 lbs. "N" = 3.9% variant type panicles.
Previously high nitrogen plots + 80 lbs. "N" = 10.7% variant type panicles.
Previously high nitrogen plots + 240 lbs. "N" = 33.6% variant type panicles.
There appeared to be a slight trend toward a higher percentage of variant panicles in the ¾ inch and 1½ inch heights of cut.

Seed yield test plots established in February, 1953 were harvested the week of May 24, 1954. Results are tabulated in the table on the following page.

The dry treatment (F) approaches significance at the 5% level for the 1953-1954 season. There are indications that by proper manipulation of water applications plants may respond with a significant increase in seed production. No significant differences were found in seed index because of either irrigation or nitrogen treatments; however, the effect of nitrogen did approach significance at the 5% level. Work is being continued to explore these phases of seed production.

Weed Control

A smothering crop of fast-germinating broadleaf weeds sometimes develops in winter and spring seedings of Merion and is often difficult to control until Merion is large enough for safe use of herbicides.

Fertilizer Treatment	Irrigation Treatment				
Lbs. N per acre **	*Nitrogen x Irr. Means Irrigation Treatments**				*N. Means*
	B	*C*	*D*	*F*	
0	38.3	48.8	39.3	48.9	43.8***
80	48.6	63.8	52.7	63.3	57.1***
160	73.4	76.8	67.7	107.1	81.3***
Irrigation Means	53.4	63.1	53.2	73.1	

Explanation of asterisks at bottom of following table.

	Cal. F	*Required F Value*		*L.S.D.*	
Treatments	*Value*	*5%*	*1%*	*5%*	*1%*
Irrigation	2.31	4.76	9.78	37.29	56.49
Nitrogen	42.37	3.40	5.61	9.82	13.31
Irrig. x Nitrogen	1.99	2.51	3.67	8.50	11.52

*Differential irrigation treatments began July 14, 1953, after which the following number of irrigations were applied until harvest May 24, 1954: B, 14; C, 8: D, 6: and F, 4.

**Total rate per acre from four split applications. One half indicated amount applied prior to August, 1953 and believed to have had little or no direct affect on seed yields.

***Highly significant at the 1% level.

Several tests were used to check the sensitivity of Merion to plant hormone type weed-killers and pre-emergence oil sprays.

2,4-D, N.C.P., and 2,4,5-T were applied at rates of ½ pound, 1 pound, and 1½ pounds acid equivalent per acre on April 4, 1953, to a stand seeded February 8, 1953. The plots were irrigated seven days after the applications. The plants averaged about ½ inch in height and were approximately in the three-leaf stage. Observations of damage and weed-kill were made May 29, 1953. In this test, 2,4-D and N.C.P. seemed to give a little better kill of broadleaf weeds than 2,4,5-T. One-half pound applications resulted in no visible damage to Merion; however, only about 50 per cent of the weeds were killed. One pound applications of 2,4-D, 2,4,5-T, and N.C.P. killed 80 to 90 per cent of the weeds, but caused some visible damage to the grass where water had stood around the plants after irrigation. The 1½ pound application produced the same type of damage to the grass and with no better weed kill.

On May 29, 1953, a second set of plots using the same materials in the same strengths were put out on the Merion plots containing a heavy stand of morning-glory. Observations made June 17, 1953 showed no visible damage to Merion. 2,4-D and 2,4,5-T were slightly more effective against the weeds than N.C.P.

To determine the effects of a pre-emergence application of a weed oil, two rows of Merion were drilled to a depth of not over ⅛ inch (many seeds visible on the surface) and two rows were drilled not over ¼ inch deep. The rows were seeded December 9, 1953, at .85 pounds of seed per acre. The oil-water-detergent spray was applied at the rate of 100 gallons per acre in two strengths on two 10-foot plots each on December 14, 1953. Stand counts were taken March 3, 1954, with results as shown in the table on the following page.

The spray applied on dry soil prior to sufficient rain for seed germination gave excellent control of weeds. It is also significant to note the differences in stand between the ⅛ inch and ¼ inch depth of seeding.

On March 5, 1954, a mixture of five quarts of Sinox-W in 100 gallons of water per acre was applied in a 10-foot strip across all four rows of Merion seedlings.

	Merion plants per 10-foot row Av. four rows		
	Check	*20%*	*40% Oil*
Drilled ⅛ inch deep	114.5	106.7	65.5
Drilled ¼ inch deep	55.2	58.0	46.5

A count was taken April 14, 1954, with the following results:

Check = 87.5 plants per 10-foot row
Sinox-W = 77.7 plants per 10-foot row

There was some spot burning of the leaves, but because of the small size of the plants and the fact that no wetting agent was used, little spray material contacted them.

Disease and Insect Control

At Davis rust appeared to be the only disease affecting Merion. From observations it is believed that Merion is more susceptible to rust than common Kentucky Bluegrass. A heavy buildup of rust was noted on September 23, 1953, and again on April 14, 1954. Rust developed on the south side of all rows, and by May 10, 1954, nearly all plants were badly rusted, including the seed heads, resulting in poor yields from the seed plots.

Sulfur dust, wettable sulfur, Captan, Parzate-278, and Phygon-XL were tested for rust control. All except the dusting sulfur were applied at 10 pounds in 100 gallons of water per acre. A detergent or wetting agent was added to make the material spread and stick to the grass leaf blades. Phygon-XL gave excellent control of rust. There were no apparent results from the other fungicides. At the present time, the optimum application for control is unknown. It appears that Phygon-XL applications will have to be repeated to keep all plant parts covered as it grows, and perhaps after rains, which may wash off the protective coating.

European leaf mite infestations cause considerable damage during most of the warm summer period. Elgatol-318 or a systemic may be effective in their control.

Treat your caddie as you would your son.

CONTROL OF ALGAE

Question: My greens are somewhat thin and there is a dark blackish green scum growing on the surface. When this surface dries, the scum peels up and forms a sort of crust. What is this, and how do I control it?

Answer: The trouble on your green is caused by algæ. Algæ is a one-celled green plant which is present in the soil and which grows on moist soil surfaces. Vigorous healthy turf will control algæ because it does not grow where the ground is covered by turf and where water does not stand at the surface. The immediate control for algæ is to dust the surface with hydrated lime at the rate of about two to three pounds per thousand square feet. This will tend to dry the surface. Allow your greens to dry out somewhat. Spike the surface by some method so that you destroy the crust that has formed and so that the water moves into the soil rather than standing on the surface. When the turf begins to recover, you might topdress lightly with a topdressing material that is of a coarse texture. When summer is over, you probably will find that you have no more trouble with algæ. At that time you should correct the conditions that cause its growth by loosening the surface of the soil so that water infiltrates into the soil readily. Your watering program probably needs to be altered, so that you water more deeply and less frequently. Make sure that you have good drainage; that is, both surface drainage and sub-drainage. Usually when soil is in good physical condition, when a good watering program is followed, and when turf is maintained in a vigorous condition, algæ does not become a problem.

IT'S YOUR HONOR

Green Section Service

TO THE USGA:

Siwanoy Country Club joined the United States Golf Association Green Section in 1954 and we are very pleased with our membership.

The clinics conducted by Alex M. Radko, Northeastern Director of the United States Golf Association Green Section, with the Golf Course Superintendent and Chairman of the Green Committee, were always interesting and instructive visits.

Mr. Radko's visit to our course, his careful and thorough examination of the soil on tees, fairways and greens, and his suggestions as to change of seed and chemicals to be used for control of weeds and diseases helped put the Siwanoy course in its best condition in many years.

1954 was the first year summer rules were played at Siwanoy since 1939 and we had no crabgrass or knotweed on the course.

The frequent aerifying of the course, seeding, fertilizing and the proper use of water gave the course a greatly improved and stronger grass.

Last October 132 professionals and amateurs played at Siwanoy. Many of them stated to our pro, Tom Kerrigan, and the Golf Course Superintendent, Harry Vare, that Siwanoy, as to fairways and greens, was the best course they had played on all season and summer rules were played.

Siwanoy is pleased to recommend to clubs which have not as yet joined the USGA Green Section that they should join as soon as possible. It would be a good investment in helping golf courses.

OSCAR E. CARLSON
BRONXVILLE, N. Y.

Motorized Golf

TO THE USGA:

Congratulations to the American Society of Golf Course Architects (their Board of Governors) for their stand against motorized golf. Caddie carts are hard enough on the course and any more motor traffic should be outlawed (in the writer's opinion).

FRANCIS B. SHEA
SAN DIEGO, CAL.

Army Buys USGA Film

TO THE USGA:

Last night I had a look at the USGA film on golf etiquette. I thought it was excellent. We are so pleased with it that we bought a print which will be circulated for showing at various Second Army golf courses. It is just the kind of film beginners should see.

We are trying to introduce golf to young men and women who come into the service and it is surprising to see the good response.

My congratulations on a very fine contribution to better golf.

F. L. PARKS
Lieutenant General, U. S. Army

Walker Cup Team

TO THE USGA:

Congratulations on picking the most representative Walker Cup Team ever. The Selection Committee did a fine job. Best of luck to the team at St. Andrews. I'm looking forward to revisiting "Golf House" as soon as I'm discharged from the Air Force. The last time I was there was in 1953 to see Bobby Jones' picture unveiled.

S/SGT. EUGENE SPILKER
ENT AFB, COLO.

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