THE BULLETIN

of the

UNITED STATES GOLF ASSOCIATION GREEN SECTION

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Contents

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The United States Golf Association is preparing to take an aggressive stand in an attempt to secure the repeal of the tax on initiation fees and club dues by the present session of Congress. Arrangements are being made for the appearance before the Ways and Means Committee of the House and the Finance Committee of the Senate, of representatives of the Association in an attempt to present fairly the position and attitude of the clubs on this important question.

United States Golf Association

To the Member Clubs of the United States Golf Association:

Your Executive Committee, at a meeting held November 18, 1926, decided by unanimous vote, to recommend for your approval certain changes in the Constitution bearing upon the classes of membership in the Association, and the Annual Dues to be charged therefor. It further recommends that a change be made in the relationship now existing between the United States Golf Association and the Green Section of the United States Golf Association, and while this latter step requires no constitutional amendment to make it effective, the Executive Committee submits it, likewise, for your consideration.

The Green Section of the United States Golf Association was chartered as an incorporated body in 1921, for the purpose of carrying on experimental and research work in connection with the growing of turf grasses and the maintenance of golf courses. The undertaking was fathered by the United States Golf Association and has been considered by the golfing public as an integral part of the Association, but in fact there is no formal connection between the Green Section and the U. S. G. A., and any supervision or control which the Association has exerted upon the Green Section has been by consent and not by authority. The work of the Green Section has grown very rapidly since its inception in 1921, and with this growth its needs for money have increased proportionately. Its revenue from dues is not sufficient to balance its budget, and it has therefore been forced to supplement this income by seeking contributions from its member clubs and also by requesting advances from the U. S. G. A. Your Executive Committee can see no good reason for continuing the separate corporate existence of the Green Section of the United States Golf Association, and, on the other hand, it can see many reasons why it should directly supervise the work of the Green Section and control its finances. To bring this about your Committee recommends that the Green Section relinquish its charter and function in the future as a Sub-Committee of the U. S. G. A., subject to the control of the Executive Committee in common with all other sub-committees. This program has been submitted to the men who have been in active charge of the Green Section work, as its executive officers, and has their hearty and unqualified approval.

To carry out the plan it becomes necessary to determine what dues shall be charged for membership in the Association, this membership to carry with it the service of the Green Section. The present schedule of dues in the U. S. G. A. and the Green Section of the U. S. G. A. is somewhat complicated and is as follows: Active Clubs of the U. S. G. A. pay annual dues of $30.00 and Allied Club annual dues of $10.00 Clubs which are members of the U. S. G. A. can become members of the U. S. G. A. Green Section upon the payment of $15.00 annual dues, but clubs which are not members of the U. S. G. A. must pay annual dues of $20.00 to become members of the Green Section. A club may thus become a member of either or both organizations.

Your Committee believes that the best solution of the whole problem is to abolish the two classes of membership now existing in the Association, i.e., Active and Allied, and have but one class of membership for all, this membership to include the Green Section service. Your Committee is also desirous of seeing the cost of this membership fixed at as low an amount as possible. After much discussion it has therefore decided to recommend that the Annual Dues for membership in the United States Golf Association, including Green Section service, be fixed at $30.00. Upon this basis it will be necessary to substantially increase the membership of the Association if the Green Section work is to be carried to its full usefulness. Your Committee believes that this increase of membership can be obtained, for it is felt that even the smallest clubs in the country can justify an outlay of $30.00 per year, bearing in mind the material advantages to be obtained from the Green Section service and, likewise, the fact that individual golfers the country over are glad to give their loyal support to an organization which is guiding the policies and shaping the destiny of the cleanest amateur sport in existence.

WILLIAM C. FOWNES, JR., *President*,
United States Golf Association.

United States Golf Association

Notice of Annual Meeting

December 3, 1926.

To the Secretary,

Dear Sir:

The Annual Meeting of the United States Golf Association will be held on Saturday, January 8, 1927, at the Pittsburgh Athletic Association, No. 4200 Fifth Avenue, Pittsburgh, at 4.00 P. M.

Each Active Club has the right to be represented by one voting delegate, duly authorized, and his appointment must be certified by his Club Secretary.

Allied Clubs are not entitled to a vote, but their members are welcome both at the meeting and luncheon, and may take part in the discussion of any matter properly brought up for consideration.

The following amendments to the Constitution of the United States Golf Association have been proposed and are hereby submitted by the Executive Committee for consideration and action at the Annual Meeting of the Association on January 8, 1927:

FIRST: Strike out all provisions of Article III and insert in lieu thereof the following:

ARTICLE III

MEMBERSHIP

Section 1. This Association shall be composed of active members only.

Section 2. Any regularly organized club in the United States shall be eligible to membership.

Section 3. Election of Members. Application for membership shall be made in writing to the Secretary of the Association, accompanied by a copy of the Club's Constitution and By-Laws, a list of the officers and members, a diagram of its golf course, and such other information as the Executive Committee of the Association may prescribe. Payment of the yearly dues then current shall be made at the time the application is sent in. Any eligible Club may be elected to membership by a majority vote at any meeting of the Association, or by a two-thirds vote of all members of the Executive Committee.

SECOND: Strike out Sections 4, 5 and 6 of Article IV and insert in lieu thereof the following:

Section 4. Voting Privileges. At all meetings of the Association each member Club shall be entitled to be represented by one voting delegate, whose appointment shall be certified in advance by his Club to the Secretary of the Association.

Section 5. Quorum. One hundred fifty member Clubs (represented by delegates in person or by proxies) shall constitute a quorum at any meeting.

Section 6. Proxies. Proxies duly certified by the Secretaries of member Clubs, may be voted by voting delegates only at all meetings of the Association. No voting delegate shall vote more than five proxies.

THIRD: Strike out Article VII and insert in lieu thereof the following:

ARTICLE VII

DUES

The yearly dues for each member Club shall be thirty dollars, payable on the first day of January in each year. Clubs which are delinquent in the payment of dues shall be denied representation at any meeting of the Association and their members shall be debarred from entering the championships or other events of the Association.

On Saturday afternoon, January 8, 1927, at 1.30 P. M., luncheon will be served at the Pittsburgh Athletic Association, to which are invited all delegates of Active Clubs, all members of the Allied Clubs who may care to attend, and golfers generally. Luncheon tickets may be secured from this office or at the Pittsburgh Athletic Association.

GREEN SECTION—Officials of the Green Section have arranged to hold meetings at the Pittsburgh Athletic Association, No. 4200 Fifth Avenue, Pittsburgh, Pa., on Friday, January 7, 1927, at 10.00 A. M. and at 2.00 P. M.; also a meeting on Saturday morning, January 8, 1927, at 10.00 A. M., at the Pittsburgh Athletic Association. A number of interesting papers will be read, supplemented by a report of what the Green Section has accomplished during the past year.

In order to facilitate the calling of the roll of Active Club delegates, and to assist the officials in ascertaining in advance that a quorum will be present, it is earnestly requested that immediate attention be given to the enclosed proxy. If it is impossible for your Club to be represented by a member, kindly fill out the proxy in blank and mail promptly to this office.

Your prompt cooperation will be greatly appreciated.

Very truly yours,

H. H. RAMSAY, Secretary.

The St. Louis District Green Section

By W. L. Pfeffer, President

The St. Louis District Green Section was founded in 1920 in recognition of the fact that the St. Louis Greens maintenance methods could be greatly improved through the cooperation of and interchange of ideas among the Green Committees of St. Louis. It was recognized that only by well thought out plans the greens in the St. Louis District could be brought to a standard comparable to the Eastern and Northern golf courses for the reason that the St. Louis climate is almost an insurmountable obstacle to maintaining greens by amateur methods.

Prior to the inception of the St. Louis District Green Section the hope of carrying greens through the St. Louis summers had been practically abandoned with the exception of a few particularly favorably situated greens and the money spent annually in rebuilding, to say nothing of the resultant dissatisfaction of members, was distinctly discouraging to both the Green Committees and the memberships.

Mistakes made by old Green Committees would be repeated in one or two years by new committees and the expense continued to mount year by year with practically no results, and as Eastern and Northern Clubs were having splendid success with new and finer grasses the dissatisfaction in St. Louis reached a point where it was up to the Green Committees to produce results.

One or two out-of-town experts on greens maintenance were given charge of several golf courses about that time but it was found their methods, used successfully on Eastern and Northern courses, were of no avail in St. Louis and that the only salvation for St. Louis was to

build up a local organization thoroughly informed on local conditions and then with the support of such scientific assistance as was available formulate a definite program exclusively for the St. Louis District.

Upon the organization of the St. Louis District Green Section meetings were held monthly alternating at the different clubs in alphabetical order and the program was to play golf in the afternoon, have dinner at the club and immediately after the dinner hold the business meeting. The object of the meeting was to discuss ways and means of maintenance for golf courses and the membership was clearly informed that this was the one and only object of the St. Louis District Green Section with the consequence that only those who were interested in maintenance work continued to attend these meetings. The attendance at times reached as high as 65 and every plan in operation or contemplated by any club was discussed and either approved or disapproved at these meetings, with the consequence that a great many distinctly hopeless propositions were abandoned.

The income of a golf club depends primarily upon the condition of their greens and fairways as this condition regulates the amount of guest fees, the membership waiting list and of necessity the house and cafe revenue as with an unfilled membership and a scarcity of guests, due to poor greens, the house committee will suffer just as much as the Green Committee; consequently we felt that by maintaining satisfactory greens we would also produce a corresponding increased revenue.

The St. Louis District Green Section has been distinctly successful and we believe that primarily it is because we have stuck to one subject, namely greens maintenance and our Green Committee chairmen are in a position to intelligently discuss any greens problem with scientific specialists, when such specialists are required.

Furthermore, the St. Louis District endeavored at each meeting to have a nationally known pathologist, entomologist, drainage expert or a specialist of some character address the meetings, at which time he is questioned minutely in regard to the local problems applicable to his subject. We have also had numerous visits from Dr. Piper, during his life time, and from Mr. Monteith, both of the United States Golf Association Green Section, and speakers from Missouri Botanical Gardens and other institutions doing laboratory work that would be of assistance to us in greens maintenance. This assistance is invaluable for the reason that there are times when a recognized authority is necessary to definitely settle questions on which there has been a divergence of opinion. While the greenkeepers and chairmen of Green Committees in St. Louis study green problems minutely they do not, of course, have the scientific knowledge that is available to the United States Green Section and several commercial organizations having research departments exclusively dedicated to this work but the greenkeepers and chairmen of Green Committees have, by attending the St. Louis District Green Section meetings, attained sufficient information to intelligently question and apply any scientific development proposed from any source engaged in research work.

The writer does not maintain that St. Louis greens are perfect today but it is a fact that the best greens in St. Louis are at clubs whose green committees have regularly attended the St. Louis District Green Section meetings and profited by the information received

there. It is a further fact that the greens of the clubs in St. Louis whose Green Committee did not attend these meetings have rapidly depreciated in the last few years. The Green Section has been of particular good to the clubs whose financial standing is small as they have received the benefit of practices in vogue at clubs able to hire competent greenkeepers whose advice is always available to the smaller clubs through the discussion and cooperation at the St. Louis District Green Section meetings.

As a means of creating interest and circulating information pertaining to greens maintenance methods among the numerous memberships, we have added to our program at each meeting a tournament consisting of one professional and one good amateur from each club with the stipulation that anyone playing in these tournaments must stay for the meeting. This is conducive to a realization by the club members, of the problems confronting the Green Committees and the work they are doing and the further realization that greens maintenance is a scientific problem and not accomplished by any one miraculous or lucky stroke, with the consequence that better support for the Green Committees is attained.

With our heavy clay soils, torrid summers and savage attacks of brown-patch an association of this kind, backed up by the splendid support given by the United States Golf Association Green Section and others engaged in this work, is beginning to realize the ideal of good greens, but what a hopeless situation it would be without this foundation.

Choosing a Green Committee Chairman

By Sherrill Sherman, Yahnundasis Golf Club, Utica, N. Y.

It is a matter little considered, yet nevertheless strange, that golf clubs, composed mainly of successful business and professional men, use so little method in selecting members of the different committees of the club. Certainly the board of management of a club, selecting men for the different committee chairmanships, should know what the work for the committee is and what qualifications the chosen man should have for the work of that particular committee. It should be self evident that the different committees of the club require for their successful work men of ability along different lines, for where one man would be extremely successful as a Green Committee Chairman, he might fail badly as a leader of the Entertainment Committee.

With a feeling that in this age of so-called efficiency, a chart or short concise list of such qualifications would be of help in the selection by a board of governors, I have presumed to write this short article for THE BULLETIN. Having spent a number of years in green committee work I feel that I may safely express my opinion as to the qualifications which would normally insure a club successfully choosing a man for the important post of Chairman of the Green Committee, with its great responsibilities for the successful growth and reputation of the club, for undoubtedly golf and the condition of the course are the main foundation stones upon which the success of a club rests.

It is possibly trite and seemingly unnecessary to list such qualifications but often the repetition of the plainest facts, even if not in

a new form, is beneficial. I believe that if these qualifications are listed separately, with maybe a division in major and minor groups, with a few words of explanation, the candidate can be checked against them readily and quickly, with the result that a good man could be chosen promptly. It is rather difficult to say what one qualification is the most desirable, but there can be no doubt that an intense interest in the work can overcome the lack of certain qualities, for interest generally enables one to overcome difficulties that without interest would appear too great to solve.

While it is hard to arbitrarily and absolutely accurately divide these qualifications I believe that the average reader would agree in general with the following division:

MAJOR

Spare time.
Good player.
Willingness to use successful methods.
Freedom from prejudice.
Knowledge of proper greenkeeping standards.
Ability to visualize the needs of all classes of players.
An intense interest in the work.

MINOR

Good organizer.
Artistic viewpoint.
Acquaintance with good courses.
Firmness to abide by a plan.
Pleasant manner.
Popularity.
Practicability.
Clear expression of opinion and explanation of ideas.
Use of knowledge of predecessor.

MAJOR

Spare Time.—Unless one has sufficient spare time and the will to use it to properly oversee the work, no matter how great his other qualifications may be, he will find it an extremely difficult matter to keep a golf course in first-class condition, for constant supervision is vital to correct the ever-occurring troubles. Due consideration must be given to the fact that the men commonly employed are those taken from the class of ordinary unskilled labor, for whom it is necessary to do the planning and thinking to obtain satisfactory results. The varying conditions under which greenkeeping must be done require constant thought to obtain the best results.

Good Player.—At least an average player, but preferably a good player, for the better player has passed through the different viewpoints as his game improved and is more likely to understand the desires and needs of players of all different abilities.

Willingness to Use Successful Methods.—The use of successful methods, proved either locally or by tested trials in other clubs or by the Green Section, means better results at lessened cost. It hardly seems necessary to go into detail on this heading, for it is now possible through THE BULLETIN to learn of the proven ways for good greenkeeping. There should be an ability to adopt the standard to local conditions which are a variable condition everywhere.

Freedom from Prejudice.—The advantage of such a condition of

mind should be most evident, for all along the line it will reduce friction with both the members and the employes. It is well to be strong-minded, but one's own ideas should not be allowed to prevent the adoption of new and better methods.

Knowledge of Proper Greenkeeping Standards.—With a knowledge of what are the standards of good greenkeeping as regards the condition of the tees, the fairgreen, the rough, the greens, the hazards and the grounds, one will naturally, with intelligent effort, keep the course in better condition than if there is no standard by which to judge of a definite goal to be reached. It is not the purpose of this article to list in detail what these conditions are or should be, for that information is available elsewhere. The chosen one can not ordinarily have a full acquaintance with all the necessary knowledge of greenkeeping but his learning through experience is much aided by the intelligent help that he can obtain through the accumulated knowledge that has been assembled by the Green Section in Washington.

Ability to Visualize the Needs of all Classes of Players.—This is where the fact that a man is a good player proves of advantage as does his freedom from prejudice, for this qualification undoubtedly means much to the happiness and development of a club and its club spirit, for with pleasant relations among all the prospect of the growth and prosperity of the club would be greatest. All kinds of men with different golfing ability and ideas make up the average club, yet all pay the same dues and feel that their desires and needs should have equal attention, and so the ability to visualize these needs, and as far as possible to gratify their wishes is most important.

An Intense Interest in the Work.—It almost seems needless to mention this, yet by this intense interest better work can be done, and results accomplished that would be lacking without it. The golf courses of the country that have had a man who combined interest and intelligence stand forth as leaders.

Minor

Good Organizer.—The proper selection of the Greenkeeper and a check-up of his organization, so that following a definite layout of the work lost motion is removed, and the same amount of work done in less time and better for less money. This surely means economy for the club, for fewer men on the payroll means more money in the club's bank account at the end of the year.

An Artistic Viewpoint.—A golf course is more than just an expanse of land for the playing of golf. All work should be done with the viewpoint of good golf and good landscaping. The courses we all like to play and visit are those which combine a good golf layout with the proper utilization of all the natural beauties of the grounds, for landscaping and golf can be combined successfully.

An Acquaintance with Good Courses.—It is by personal visits to good golf courses that one is able to see a real standard by which he can properly gauge the upkeep conditions of his own course and its layout and so can change whenever and wherever necessary.

Firmness to Abide by a Plan.—Naturally continual changes in method of upkeep or layout of the course cost much money, so after due consideration and the adoption of a plan, abide by it, in spite of criticism, mostly given without due thought, by the members.

Pleasant Manner.—A pleasant manner in discussing complaints and suggestions by members, with a willingness to accept good ideas cheerfully with due appreciation, and the discernment to be able to show clearly the lack of practicability of those which can not be used. At times it is necessary to issue some rule or order that is based on sound grounds that to the crowd may appear unreasonable, and in such a situation agreeableness would go a long way to handle the matter without friction.

Popularity.—It is well to choose a popular man, if he has the ability, for he will be better able to carry members to agreement with his ideas and his popularity will mean that members will approach him in a mood of friendship when expressing to him their opinion whether of praise or criticism.

Practicability.—To have ideas, visions, and time to fulfill them is not sufficient alone to insure success, for one must have the practical ability to turn ideas into actual work, at a cost that is within the income of the club as outlined in the budget submitted to cover the work of the year by the Green Committee.

Ability to Clearly Express Opinion in Words and Action.—An ability to clearly express his opinion so that all hearing may definitely understand his idea. Also the ability to be able to show the reason for his orders to the employes, for knowing the reason for doing a certain thing in a particular way makes the work more intelligent, and consequently better results are obtained. If a workman is shown how worm casts deflect the course of a ball as it rolls on the putting green toward the hole, he will be more careful when rodding the green to eliminate the worm casts.

Use of Predecessor's Knowledge.—If the predecessor has performed the work well with due consideration for economy and permanent results, and kept the course in first-class shape to the satisfaction of the members, do not hesitate to use his knowledge and methods acquired through perhaps years of actual experience. Do not feel that it is necessary to follow the old saying that a new broom should sweep clean and change everything about, for probably there has been a good reason for the methods used. On the other hand, do not feel that you are bound to follow slavishly without any initiative, but improve as you are convinced that you can better perform the work in another way either more quickly, more economically or more easily.

It is hoped that these few simple suggestions may prove of some value to the golf clubs in the selection of the right man for the very important position of Chairman of the Green Committee with his great responsibility for the financial success and good name of his club, for clubs are judged as much by the condition of their courses as they are by the completeness of their club houses.

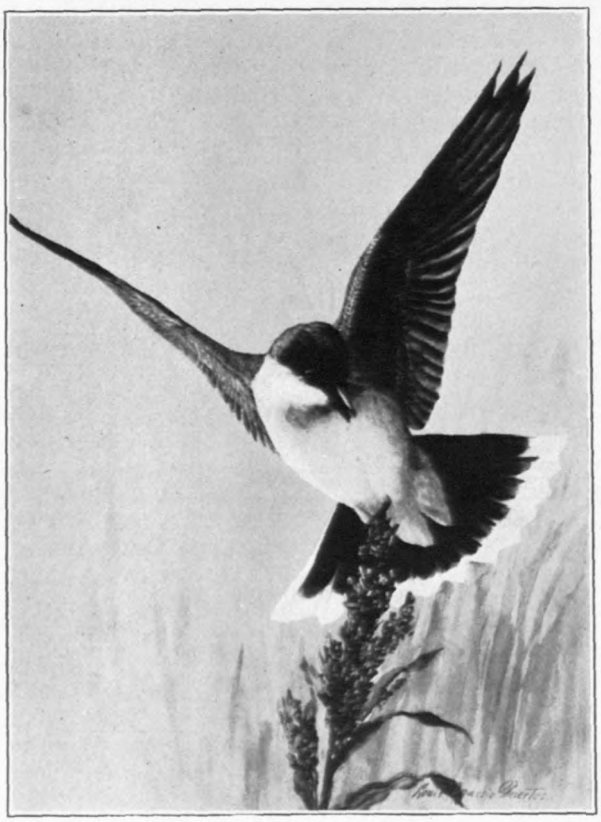
Back numbers of The Bulletin.—1925 volume, all numbers available; 1924 volume, all numbers available except January and March; 1923 volume, June to November numbers only available; 1922 volume is exhausted. Price of single numbers, to member clubs, 35c each. The entire 1921 volume is, however, available, reprinted and bound in paper covers, for $2.25.

Birds of the Golf Course

The Kingbird

By W. L. McAtee

Kingbird is a big name for a bird, especially for one that is only eight inches long, but the so-called bee martin deserves it not for lording it over the rank and file of birds of about its own size, but for courageously challenging and driving away all predatory birds, including the largest hawks, some of which exceed it a hundred times in bulk. Farmers not too much impressed with the kingbird's fondness for honeybees (of which it eats mainly drones) encourage the birds to remain on their premises for the good they do in protecting poultry from hawks. The kingbird's sentry duty benefits all of its wild avian neighbors also and makes it a desirable species for any place where large numbers of birds are wanted.



THE KINGBIRD

Appearing black (although chiefly dark gray) above, and white below, the kingbird is a very trim fellow. As ornaments, the tip of the tail is white, and a usually concealed patch on the crown varies from orange to vermillion. The bird breeds in all but the southwestern states, where the Arkansas kingbird, very similar in appearance and habits, takes its place.

One of the flycatcher family, birds which customarily take their prey in the air, launching forth from favorite perches and seizing their food with a distinct snap of the bill, the kingbird, furthermore, does not hesitate to come to earth for victims. Thus it obtains a greater variety of food, and on golf courses which it likes, if apple, plum, or thorn trees for its nests are available, it feeds upon many of the insects that the greenkeeper constantly must fight.

About nine-tenths of the kingbird's food is composed of insects, and the remainder chiefly of wild fruits, of which those of blackberry, cherry, elder, sassafras, and grape are most often eaten. The bird takes many of the dung beetles and their relatives which burrow

into greens, including such well known pests as white grubs, the green June beetle, and the Japanese beetle. Digging wasps and bees also are on its bill-of-fare. Such miners in turf as wireworms, clover-root borers, and leather-jackets (larvae of crane-flies), and such grass eaters as leaf-hoppers, cutworms, and other caterpillars, and grasshoppers, also are devoured. Ants, nuisances everywhere but especially so on putting greens, are freely eaten by the kingbird, probably mostly on the wing when they are flying to new points of infestation.

The kingbird does well, as it also looks well, on the golf course, and should always be protected.

The Most Prevalent Defect in American Golf Courses

By Maynard M. Metcalf

I do not know European golf courses, but have studied 86 in North America and 13 in South and Central America. Almost nowhere have I seen at all adequate provision of practice ground and proper facilities for the giving of lessons.

Practice ground of sufficient size and proper character for driving, for short and long approaching by run up, pitch and run, or dead-stop shots, for shots out of sand traps and out of rough and for putting should be provided in connection with every course which is designed to train good golfers; and ground for lessons with open-front rain shelters for instruction should also be provided.

Members will not practice enough if they have to use the course itself for this purpose. They feel that they are in the way and are a nuisance and they know it is irritating to themselves in practice to be constantly interrupted by players. For the training of good golfers practice is at least equally important with play. It should be encouraged by providing abundant room with opportunity for trying out all kinds of shots.

It isn't quite reasonable to deprive instructors and players of opportunity for lessons in rainy weather. High, open-front sheds can be built very cheaply and will enable the golf instructor to continue his work on mildly rainy days, a benefit to his own purse and a decided advantage to the players.

It seems strange that nearly all golf courses are lacking in practice ground, in ground for lessons, in teaching sheds, or usually in all three. Probably the provision of these facilities in our clubs would do more than anything else of similar cost to improve American golf.

Variation from Standard Practice

"In the past three years I have used approximately 1,000 yards of topdressing; each year the amount has diminished materially as the putting surface improved. During the growing season I use about a yard of topdressing at each application. I do not go by any set rule as to how often I topdress for I know my soil condition and topdress when necessary. Some of my greens are topdressed nearly twice as often as others, occasionally going as long as seven weeks without showing the need of topdressing."—C. M. MELVILLE, *Greenkeeper, Southmoor Country Club, Chicago, Ill.*

The foregoing quotation illustrates the fact that golf course maintenance can not be completely successful by blindly following rule of thumb methods. While a cubic yard to each 5,000 square feet is an excellent average there are conditions which make variation from it advisable, the new green whose surface is not yet true probably requiring more than that rate while the old green with well established turf and a true putting surface will need less.

The careful greenkeeper realizes the need of varying his methods to suit changing conditions. Not only is this true as applied to topdressing, but also to the use of chemicals, fertilizers, frequency of mowing, and most often to watering. On the same course variations in drainage, soil fertility, contour, and so forth lead the observant greenkeeper to depart from what might be called his standard practice, but only after becoming convinced that special methods are required.—EDITORS.

Mr. Howard F. Whitney, a former President of the United States Golf Association, has been elected a member of the Rules of Golf Committee of the Royal and Ancient Golf Club of St. Andrews. Mr. Whitney is the first American golfer to become a member of this committee.

Those interested in golf course architecture, if only slightly, will find The Links, by Robert Hunter (Charles Scribner's Sons) a notable contribution to the literature on that subject as well as very easy reading.

The following quotations from Mr. Hunter's book illustrate the idea emphasized throughout that golf architecture should have two aims, one utilitarian, the other artistic.

"In most of the best work of today ploughs and scrapers are used to fashion and contour the ground so that it may be made to serve the uses of the game. Proportion, symmetry, and uniformity are carefully worked out in the designs, and when the finished product appears it so blends itself into the surrounding landscape that few can tell where nature ends and art begins."

"Some indifferent holes have many hazards; and some of the best have few. Nearly all great holes have a particular terrain which has made their greatness possible."

"Now and then one finds a hole of real distinction which nature herself has modelled, and to add anything artificial would be a crime. That is, of course, rare, but he who can not see such natural features and take full advantage of them is unfitted for work in this field."

"Placing The Hazards," is the title of the chapter which will probably be of greatest interest and value to the layman, although the entire well illustrated volume might profitably be read by most Green Committeemen.

Soil for topdressing.—If compost is not available, loamy soil, well screened, can be used advantageously as a topdressing. It is generally advisable to mix some sand in the soil, in larger proportions if the soil on the course is of a clayey nature, and in lesser proportions if the soil is already sandy.

Observations on Brown-Patch Control in 1926

John Monteith, Jr.

In the December, 1925, number of THE BULLETIN an attempt was made to summarize the experiences of different clubs in controlling brown-patch during the preceding summer. It was felt that by supplementing the reports of experiments at Arlington by some such impartial summary of results obtained on greens in various sections of the country, the problem could be more generally understood and the practicability or limitations of any control method could be better defined.

It is well recognized by the Green Section that the experimental work at Arlington is only preliminary; that control methods used there may prove entirely impractical on many courses, due to different soil and climate or to various local circumstances. In our experimental work we can hope only to outline certain fundamental principles of control, the applicability of those principles to actual golf course maintainance must be determined by the various clubs under their own local conditions. On the Turf Garden at Arlington a large number of possibilities can be compared under identical conditions; the majority of them may be discarded as useless or impractical whereas the occasional promising method can be passed on to clubs for trial. We are fortunate in having throughout the country many men who are sufficiently interested in the work to try out these suggestions on their own courses. We are fortunate furthermore in having many of the much rarer type of individual who in addition to making such tests are willing and generous enough to report results that other clubs with similar problems may share their information. Thanks to this latter group we are able to prepare this summary of the past season's experiences in controlling brown-patch. Although the names of some of these contributors are not cited in this report, their information is equally valuable and as fully appreciated as those directly quoted.

Control of the disease by means of different mercury compounds has been the chief method of interest throughout the season. The two chlorophenol mercury preparations (Uspulun and Semesan) have been thoroughly tested all through the brown-patch region. The treatment with bichlorid as suggested in the October, 1925, and the July, 1926, numbers of THE BULLETIN was tested in an experimental way in several localities, and on some courses was used extensively.

The results obtained with Semesan and Uspulun were in general similar to those of the preceding season. In some cases Semesan is preferred while in others it is thought that Uspulun gives better control. Such differences are usually negligible and when reports are summed up it is apparent that these two preparations of chlorophenol mercury give results so similar that they may be regarded as interchangeable. In the St. Louis district, where brown-patch is usually extremely destructive, both of these chemicals gave satisfactory results. Mr. W. L. Pfeffer, president of the St. Louis District Green Section, in summarizing recent experiences states that until the last two seasons, "there had been hardly a year that brown-patch did not totally destroy a lot of greens and damage all of them to such an extent that rebuilding of greens in the St. Louis District was a common

occurrence. Prior to 1925, with a few exceptions, St. Louis never expected good putting greens after the middle of July, but since the experiments held at Algonquin in 1925 the Algonquin Golf Club and every other golf club in St. Louis that followed the practices established at Algonquin have had splendid putting greens and this is due to absolutely no other feature than to the elimination of brown-patch by the use of Semesan or similar hydroximercurichlorophenol disinfectants."

He emphasizes the value of some control treatment to carry the turf through the brown-patch season in a vigorous condition for the fall and winter months: "The treatments in 1925 not only carried our greens through the brown-patch period of July and August, 1925, but necessarily produced immeasurably stronger and better turf to go into the fall and winter with the result that the spring of 1926 found us with greens beyond our fondest hopes or expectations. Instead of rebuilding and replanting each year, as we formerly did, with the resultant seedlings with which to combat our torrid summers, we found ourselves with strong, well developed turf that even without any treatment whatsoever possessed so much more vitality than the young grass we formerly had that it would without doubt by its vigor alone go a long way towards surviving our brown-patch season, but with a resumption of the Semesan treatments based on the experiments of 1925, our greens went through the summer in almost as good condition as through any other month of the year and we now have vigorous, luxuriant bent on all the greens that have gone through two summers with the resultant increase in roots and vitality and without doubt will improve in texture and quality with each succeeding year."

The method generally used in the St. Louis district consists of repeated applications as needed throughout the summer. During periods of greatest activity of the fungus, an application may be required within a few days of the previous treatment. Commenting on the expense of this method Mr. Peffer writes: "Treatments of chlorophenol mercury were at first thought prohibitive but our experience has been that the expense can be minimized by a close inspection and immediate application of Semesan to the affected parts only, which eliminates the expense of continual drenching of the entire greens and naturally eliminates most of the expense. The expense, however, in this district is infinitesimal in comparison with the old system of rebuilding and reseeding to such an extent that even the reseeding costs as much or more than chlorophenol mercury treatments, to say nothing whatsoever of the appreciation in the quality of the greens under the mercury treatment and the peace of mind in knowing that you could produce a beautiful green and retain it."

Semesan and Uspulun have been likewise effective in many other sections of the country. As was the case last year, however, there are occasional reports of failure to control the disease by these chemicals. Many clubs have found that although brown-patch may usually be checked by this means there are times when the period of protection is too short to justify the expense of the treatments. There were also some reports of burning with both of these chemicals when used at the standard rate of 1 pound per 1,000 square feet, especially during July and August.

Bichlorid of mercury as a means of controlling brown-patch has

been watched with especial interest this year. As has been previously pointed out in THE BULLETIN, this chemical is equally effective in checking the disease at Arlington, but more likely to produce burns than are the chlorophenol mercury compounds. The great cost reduction in using this treatment led many clubs to try it on an extensive scale during the past season. Perhaps the most outstanding course where this chemical proved successful was Baltusrol. When the National Amateur Championship was played there in September, Mr. R. A. Jones, general manager, reported that he regarded bichlorid, which had been used against brown-patch throughout the season, as far superior to either of the chlorophenol mercury preparations. In the case of Baltusrol the treatments were made under the direct supervision of Mr. Jones and every care taken to avoid careless or uneven distribution, with the result that no serious burning occurred throughout the season. Bichlorid was put on with the regular application of ammonium sulphate, using a proportioning machine. This treatment was coupled with his usual expert attention given to care of the turf; in which watering, mowing, fertilizing and such matters were not overlooked in keeping the grass in a healthy condition.

We have a similar report from Massachusetts by Mr. Ernest T. Clary of the Whitinsville Golf Club. Mr. Clary wrote that shortly after receiving the July issue of THE BULLETIN a bad attack of large brown-patch occurred on one of the greens: "We procured a supply of corrosive sublimate and applied it to this green as suggested, using about two pounds mixed with our regular topdressing which consists of compost and sulphate of ammonia. The results of this treatment were very satisfactory. The brown-patch was immediately checked and the poor spots began to come back.

"You may be interested to know, however, that about two weeks later brown-patch attacked the same green. We used the same treatment again with the same satisfactory results. This last treatment was made about two weeks ago and at the present time we can see very little evidence on this green of brown-patch.

"It will probably interest you to know that in our first application of the corrosive sublimate there were some traces of burning of the grass. This may have been due to the fact that in our haste to make the application we did not allow the mixture of topdressing to set over night. In fact we applied the topdressing just as soon as we could get it mixed up. Or it may have been due to improper watering-in of the topdressing. On the second application we did not experience any trouble with burning.

"There were slight signs of large brown-patch in several of our other greens so we proceeded to topdress all the greens with the corrosive sublimate in our mixture. No brown-patch has developed in any other green to date."

Mr. Fred Holmes, chairman of the Green Committee of the Country Club of LaFayette, Ind., on August 20 wrote: "We have completely checked two mild attacks of large 'brown-patch' with corrosive sublimate mixed with top dressing, some ammonium phosphate being included. Some untreated tees of Washington strain developed a few bad spots, but the greens showed very little discoloration either from 'brown patch' or treatment, although a careful inspection a week after the last attack reveals a few patches where the grass has not fully regained its vigor. We used a light application—about 5

ounces for 3,000 square feet, or 10 ounces to a green of 6,000 square feet. These applications seemed to give complete control under our conditions.

"In one case the greens did not need topdressing and in that case our greenkeeper only used about 1 pail of topdressing to 3,000 square feet, he treated six greens in two hours."

On September 3 he reported further experiences: "I am sorry to have to report that, although we did this successfully twice, the third time we did not use quite as much care with the result that two of the greens show small burned patches. Because of this we have decided that in treating greens in the future, we will use about 1 yard of compost and 20 ounces of mercuric chlorid for 6,000 square feet."

In the Philadelphia section bichlorid was given a thorough trial during the summer. It was reported that this chemical controlled the disease as satisfactorily as the chlorophenol mercury preparations but difficulty was experienced due to scorching the grass, particularly in late summer. Mr. H. Kendall Read, who was especially interested in the trials made on courses in the vicinity of Philadelphia, concluded that much of the burning was due to carelessness in applying the chemical. He makes another point against bichlorid in the observation that brass hose-couplings and nozzles are gradually destroyed by its corrosive action. Mr. Jones, on the other hand, states that although this had happened at Baltusrol it was found that by thoroughly washing the machine and hose immediately after use there was comparatively little loss, the saving in cost of material much more than compensating for the injury to couplings or spray discs.

In the St. Louis district where the chlorophenol mercury compounds gave such satisfactory results it was found that bichlorid, when applied in midsummer according to directions given in THE BULLETIN, caused some very severe burns. It was noted that in cases where the burning was but temporary the disease was checked. On the whole, however, this chemical was regarded as entirely unsatisfactory in that section.

In reviewing these reports we note, with a considerable degree of satisfaction and encouragement, that the experiences of various clubs coincide in general with the experimental results obtained at Arlington. The chlorophenol mercury preparations when properly applied apparently check the disease under practically all conditions. As at Arlington, this control has nowhere proved permanent, the protection varying from a very few days to several weeks, depending upon climatic conditions. From practically every section where it was tested we have reports that bichlorid controlled the disease as effectively as the chlorophenol mercury preparations, the period of protection likewise varying from a few days to several weeks. It is possible that soil conditions influence to a considerable degree the control by any of these chemicals. Excessive rain may reduce their effectiveness and at the same time favor the development of the disease; a situation which may account for many of the disappointments reported. "Failures" are not infrequent where a greenkeeper (who had perhaps been misguided by a too enthusiastic salesman) expected one or two treatments with Uspulun or Semesan to entirely solve all his brown-patch problems for the season. It is apparent that the turf must receive proper care, with due consideration of the

many cultural conditions that affect the development of the disease, if any mercury application is to be fully effective.

The cause of "burning" is still a question. Various cases of injury from each of these mercury compounds have been reported. At certain times any of them may be used greatly in excess without any evidence of harm while at other times even the so-called "standard" treatments have produced permanent injury. Since it has always been recognized that bichlorid is more likely to scorch grass than is chlorophenol mercury, THE BULLETIN has recommended that it be tried first in an experimental way. The reports from various clubs have further emphasized that this chemical must be used with greater care and that under certain conditions it may be entirely impractical. Much of the burning no doubt has been due to carelessness, but this by no means explains all cases of injury. Our work at Arlington this summer, together with these outside reports, indicate that previous recommendations were excessive. The use of 1/5 pound of bichlorid, rather than 1/3 pound per 1,000 square feet as previously recommended, is more nearly the equivalent of the standard 1 pound per 1,000 square feet of Uspulun or Semesan. There are times, particularly during July and August, when the grass is "soft" and more likely to be injured. In such periods, especially on courses or individual greens where the turf is more sensitive to chemical injury, the rate of applying any of the mercury compounds must be considerably reduced below the usual recommendation in order to avoid discoloration or more severe burns. It follows that such treatments must be more frequent.

From all the evidence we have been able to obtain, it is apparent that bichlorid has an important place in brown-patch control on many courses. In the early summer when injury to turf is rare it can undoubtedly be used to advantage on any course, for it serves to rid the green of earthworms as well as provide protection against early attacks of brown-patch. Again, toward the end of the brown-patch season, it is less likely to injure turf and may be used with comparative safety against the disease and earthworms. During July and August, when the risk is much greater, it should not be generally used unless the greenkeeper is thoroughly familiar with it.

While the difficulty due to burns experienced on many courses may be considered as altogether discouraging to those who hoped to find in bichlorid a cheaper means for control of brown-patch, the close correlation of the above tests with results at Arlington serves to give greater confidence in the likelihood that calomel will fulfill these requirements. The criticism against bichlorid has not been due to its failure to control brown-patch as effectively as Semesan or Uspulun but to its tendency to injure turf. As pointed out in the October number of THE BULLETIN, calomel during the past season at Arlington has been fully as effective as any of the mercury preparations and is least toxic to grass even when applied in excess. If tests in various parts of the country next year substantiate these preliminary observations, as is to be expected from the results with bichlorid, it is probable that the most economical use of mercury against the disease will in the future consist of an early season application of bichlorid against the fungus and earthworms followed by treatments with calomel during the months when burning is most likely to occur. This, however, remains for clubs to determine during the next brown-patch season, for as yet calomel has not been tested on golf courses.

There is one item which should perhaps be included in this summary since it has been brought to our attention from various sources during the past season. It has been claimed that there is abundant evidence that bichlorid, unlike the organic mercury preparation, accumulates in the soil and after being used a few times it causes discoloration and permanent injury to turf; such as is the case with bordeaux or other copper treatments. It is true that many cases of burning with bichlorid have been reported just as we have seen many cases of burning with Semesan or Uspulun. This "burning" is an immediate effect (either temporary or permanent) and is entirely distinct from the accumulative injury of copper compounds. That is, the damage is apparent soon after the application of the chemical, as is the case with ammonium sulphate, and the second or even the tenth is no more likely to burn than the first application. Much pseudo-scientific literature has been circulated emphasizing the difference between the inorganic bichlorid of mercury and the organic mercury compounds such as Uspulun and Semesan; pointing out the danger of an accumulation of bichlorid in the soil which it is claimed does not apply to the organic forms. Alarming as these arguments may sound to the greenkeeper or green committee not familiar with such complicated chemical distinctions, the fact remains that at Arlington after repeated and excessive applications of both forms we have as yet found no harmful accumulation of mercury from either. So far as we have been able to determine wherever both types of mercury combinations have been used against brown-patch any such unfavorable comparison between the organic and inorganic form is apparent only to those with direct financial interests in the sale of chlorophenol mercury.

QUESTIONS AND ANSWERS

All questions sent to the Green Section will be answered in a letter to the writer as promptly as possible. The more interesting of these questions, with concise answers, will appear in this column each month. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Section.

While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

1. Shade grass.—Please advise us whether you consider bluegrass or bent preferable for partially shaded tees. Or is there some other grass you recommend in preference to either of these? Water is available for watering the tees. (Illinois.)

ANSWER.—There seems to be relatively little difference between bluegrass and bent as regards ability to grow in shade. Neither is a particularly good shade grass, but of the two we would be inclined to choose the bent. A better shade grass than either is *Poa trivialis*, which is also called rough-stalked meadow grass, or bird grass. This is an excellent shade grass. It should be sown preferably with bent or redtop, as is the practice in sowing Kentucky bluegrass. It requires

moist soil, and since you have water available you could give it sufficient moisture.

2. Proliferations in turf.—We have Washington strain bent greens. They have a good color except for small light spots the size of a 25-cent piece. The light spots are bent and grow as fast and are as good turf as the green part of the grass. Can you tell us the cause of these spots? (Illinois.)

ANSWER.—It appears from the description of the light spots you report in your letter as appearing in the Washington strain of bent greens that this condition is the same that has been observed at Arlington over a period of several years. In the fall of the year, and sometimes in the spring, certain strains of true creeping bent and velvet-bent exhibit a mottled or spotted appearance due to small tufts of grass quite unlike the surrounding turf in color and somewhat unlike it in texture. The spots are rarely more than 2 inches in diameter. These spots are made up of young grass plants produced on the stems of the older plants. Botanically the tufts or rosettes are proliferations from the older turf. They are apparently not due to any disease. Applications of sulfate of ammonia and ammonium phosphate have not been beneficial in discouraging their formation. Light dressings of compost have had a tendency to cause the turf to return to a normal condition—that is, to discourage the growth of these somewhat unsightly tufts. The cause of their formation is still obscure. These spots are not objectionable from the standpoint of the game but they certainly are unsightly on fine bent turf.

3. Improving rough which is too easy to play from.—Our rough is too easy to play out of and we are trying to find the best method of making it difficult without making it more expensive to keep up and without increasing the likelihood of losing balls. (New York.)

ANSWER.—We know of cases where good results have been obtained by removing the sod from the rough and then sowing sheep's fescue at the rate of 40 to 60 pounds per acre. Sheep's fescue is an excellent grass for the rough, since it grows in bunches of about the proper character and does not make a tall growth that requires frequent cutting. Sheep's fescue and Canada bluegrass make a good mixture, or either used alone is good. The purpose in skinning off the sod where the rough is made up of really heavy turf is to get a poorer soil, since it is difficult to get satisfactory rough on rich soil. Both sheep's fescue and Canada bluegrass do well enough on poor soil to make rough that will penalize wild shots without causing many lost balls. When the rough is made up of a rank growth the treatment suggested above will not only vastly improve the condition of the course but will furnish valuable material for compost.

4. Grasses for rocky or gravelly mounds.—We have several mounds on our course made up of piles of rocks. What grass will grow on them? (Massachusetts.)

ANSWER.—Sheep's fescue is probably the best grass for this purpose. Blue lyme-grass is a beautiful grass for growing in bunkers on sand ridges, and will probably grow on your rock heaps where the soil is sufficiently deep.

MR. NORTHERN GREEN COMMITTEE CHAIRMAN:

You have undoubtedly passed a very trying season coping with numerous golf course problems, striving to keep the course in first class condition, and dodging balls and destructive criticisms which were purposely sliced and hooked in your direction by some inconsiderate club members who blamed their rotten game on the condition of the course and sought revenge on you.

Naturally after the playing season has passed your interest in the course and matters pertaining to its maintenance has a tendency to flag, you breathe a sigh of relief and try to forget golf for a time. Perhaps you feel that you deserve a vacation, which of course you do, but since you are Chairman of the Green Committee there is no time for a vacation just yet.

After taking an inventory you will be surprised to know how much new equipment is needed and what extensive repairs are necessary to various machines. Do not wait until spring to attend to these repairs. If necessary to send machines to the maker for overhauling do so now and if the work can be done by your own mechanic order the new parts for him at once.

And before you go South for a little golf why not review the work of the past season and make definite detailed plans for next year? Are there approach areas where a ball bounces badly or a long two shot hole where you too seldom get a wooden club lie? If so, how about some topdressing on these spots as early in the spring as possible and how many yards of material will be required for the job? Surely the inclusion of these items in your new budget is desirable.

Do you really know the area of each of your greens? If not how can the application of chemicals, fertilizers, or compost be anything but guesswork? The difference in appearance of a 6,000 and 8,000-foot green is not great but the difference in material to be applied during a season is. Then too, if you are not sure about this detail your estimate of sand, fertilizer and compost required for upkeep is only a hazy dream.

If tile should be laid to correct poor drainage anywhere on the course there will never be a better time to plan for it than now.

And why not clean up that bit of rough where the grass is so rank that a shot into it generally means a lost ball? The topsoil from that spot would be of value in the compost pile whereas now it is the cause of needless misfortune. Perhaps fescue would be better there than bluegrass anyhow.

All these things are still fresh in your mind. Jot them down for reference now and work them into your plan for 1927.

In case you must lay off several good men why not insure their return next spring by getting them jobs for the winter? Some club member is probably looking for just such men. You might be of mutual help to each other as well as to your club by making it worth while for the men you want on your pay roll to stay there. It will certainly help your greenkeeper if the majority of his force are trained to golf course work. Instructing greenhorns is a waste of valuable time.

THE GREEN SECTION.