

## Annual Report of the Green Section for 1931

By Ganson Depew

Chairman, Executive Committee

During the past year several important changes have occurred in the personnel of the three committees of the Green Section. By far the most important was occasioned by the death of Dr. R. A. Oakley, at Monrovia, Calif., August 6 last. Doctor Oakley, with the late Dr. C. V. Piper, was largely instrumental in the establishment of the Green Section, and in its work as chairman of the Research Committee he took a very active part until incapacitated by illness. A great debt of gratitude is due Doctor Oakley for his valuable services for more than 15 years. His place has been taken by Dr. K. F. Kellerman, associate chief of the Bureau of Plant Industry of the United States Department of Agriculture, who is giving the greatest possible cooperation. Wynant D. Vanderpool, who for a number of years was the able and efficient chairman of the Executive Committee of the Green Section, resigned as chairman, but we are fortunate in still having the benefit of his services in his willingness to remain on the committee. To the Research Committee were added three scientists of the United States Department of Agriculture: F. H. Hillman, botanist, seed investigations; Oswald Schreiner, principal biochemist in charge, soil fertility; and W. R. Walton, senior entomologist, cereal and forage insects. Several changes were made in the Advisory Committee, including the addition of the following names: Douglas Call, Richmond, Va.; A. J. Goetz, Webster Groves, Mo.; William Harig, Cincinnati, Ohio; J. McRae Hartgering, Detroit, Mich.; Guy M. Peters, Chicago, Ill.; John Morley, Youngstown, Ohio; Alex Pirie, Fort Sheridan, Ill.; William J. Rockefeller, Toledo, Ohio; George Sargent, Columbus, Ohio; John Shanahan, West Newton, Mass. The last five are greenkeepers placed on the Advisory Committee for the first time and whose cooperation will mean much to the work and problems of the Green Section in the future.

During the year it was necessary for the Green Section to operate on a budget which was much below the budget allowance for 1930. Certain economies were, however, effected and it was thus made possible for the Green Section to function satisfactorily in spite of the handicap of a reduced appropriation.

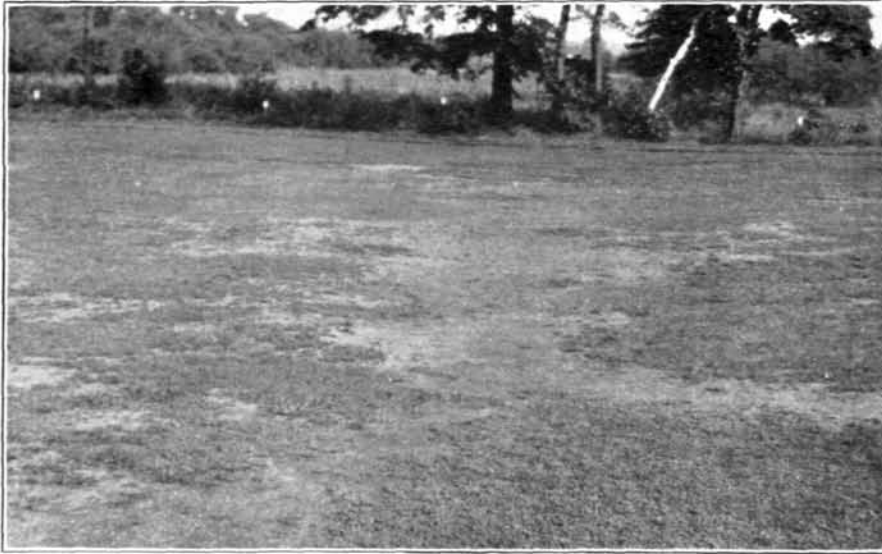
A careful perusal of the following report of the activities of the Green Section prepared by John Monteith, Jr., will show the value of a membership in the United States Golf Association or will prompt clubs to join in order to obtain for the small dues of \$30 a year the information and services given by the Green Section in promoting better turf conditions and economy of maintenance.

### GENERAL ACTIVITIES OF THE GREEN SECTION DURING THE YEAR

The summer of 1931 proved to be an extremely difficult one from the standpoint of turf maintenance in many parts of the country. The extremely high temperature prevailing over long periods, coupled with unusual epidemics of diseases and insect pests, resulted in widespread havoc on golf courses over a wide range of territory. The extensive damage to turf brought about an extremely heavy demand for advice

from the Green Section's staff. There was also an increased demand for the Green Section's advice on the relative efficiency of certain materials used on golf courses, probably due to the need for more effective use of limited funds available for golf course maintenance in the past season. The Green Section's staff was able to take care of most of the increased demands for its service.

The general activities of the Green Section were in most respects similar to those of previous years. Those activities naturally fall into three major divisions: research, educational, and advisory service. The principal research of the Green Section has been conducted at Washington, Chicago, and Madison, Wis. The Green Section continued its annual contribution of \$1,000 to the turf research work



Dead turf on the fairway of an eastern golf course representing a type of injury commonly found on golf courses during the summer of 1931

being conducted at the New Jersey State Agricultural Experiment Station, New Brunswick, N. J. Our educational work has been carried on through various Green Section meetings and exhibits, publication of our Bulletin as well as material in certain private publications pertaining to golf, and numerous educational programs in which the Green Section's staff has participated upon invitation of sectional greenkeeping organizations and officials of college short courses in greenkeeping. The advisory service has been carried on chiefly through correspondence, but as much as could be handled by the limited staff of the Green Section has been conducted by personal interviews either on golf courses or in the Green Section's office or laboratories. By means of this service member clubs have their individual problems analyzed and special procedures are outlined. During the year a large proportion of the clubs which are members of the United States Golf Association have availed themselves of the opportunity to have the Green Section's staff render reports on seed or soil analyses and give advice as to seeding, fertilizing, watering,

mowing, and innumerable other problems confronting those who care for our golf courses. The special activities of the Green Section for the year are given below.

#### ARLINGTON TURF GARDEN

Experimental work at the Arlington turf garden was continued on the old garden and was supplemented with various tests on a new garden planted in a shaded area close to the Potomac River. As the result of the establishment of this new garden an opportunity was provided to make observations on similar grasses and treatments on turf growing on a low protected area in comparison with the turf grown on the high wind-swept locality of the old turf garden. It is hoped that as these tests are continued certain fundamental information will become available as to the best maintenance procedure for golf course turf growing under such distinctly different conditions.

During the year interesting observations were made on different strains and species of grass maintained for putting green purposes. Many of the strains of bent grass were severely damaged during the summer months in spite of every effort to control diseases. The greatest damage of the year among the bents occurred in certain strains of velvet bent. While many of the selected strains of velvet bent were almost entirely destroyed during the summer, there were other selections which withstood the summer remarkably well. Their behavior this year further emphasized the need for continued study of strains of velvet bent before they can be recommended for general planting on putting greens. Some of the well-known strains of creeping bent on the turf garden withstood the summer's tests in excellent condition. The unusual prevalence of diseases on the garden throughout the summer provided an excellent opportunity for experiments on their more effective control. The remedies for brown-patch control, devised and recommended by the Green Section in previous years, continued to prove the most effective remedies for both the large and small types of brown-patch. New information was obtained on the control of leaf-spot and Pythium. Further study, however, is needed before treatments for these diseases can be recommended for general use.

The systematic study of fertilizers and grasses, top-dressing, weed control, and other problems at the turf garden which has been under way for several years, was continued. In conjunction with the turf-garden work a study of the relationship of the acidity of soil to the growth of bent grass was conducted at the Arlington experiment farm. This work was carried on in one of the greenhouses of the United States Department of Agriculture during the winter and spring months and continued outdoors through the summer. Studies in nutrition were carried on with other grasses and much useful information was obtained from this work. It is expected that some of the results obtained from these studies will be published in the Bulletin in the near future.

#### MID-WEST TURF GARDEN

The Mid-West turf garden, which is now three years old, is located at Everett (West Lake Forest), Ill. The work at this garden

was carried on in much the same manner as the work at Arlington, but there are on this garden different sets of tests to supplement the work conducted at the Arlington turf garden. Various tests with different fertilizers and grasses, as well as the height-of-cut experiments and other studies under way at that garden, were continued throughout the year and furnished additional information of value in the general understanding of turf problems, particularly those of the Middle West.

During the year the Botany Department of the University of Chicago continued its cooperation with the Green Section in providing laboratory and greenhouse facilities for a member of the Green Section's staff. The study of the effect of cutting grasses to different heights was continued at the University of Chicago and also at the Mid-West turf garden. Some of the preliminary results of these studies have recently been published in *Plant Physiology*, as well as in the Bulletin for November, 1931.

#### DEMONSTRATION GARDENS

A series of demonstration turf gardens which was started in 1928 on golf courses in several states continued to provide much information for those interested in turf maintenance on courses in the vicinity of these gardens. Another garden of this series was planted in October, 1931, on the course of the Pine Valley Golf Club, Clementon, N. J. The Green Section had the opportunity during the season to render assistance to the Royal Canadian Golf Association in establishing one of these demonstration gardens on the course of the Royal York Golf Club near Toronto. The Green Section has had splendid cooperation from those in charge of the courses where these demonstration gardens are located. Extensive reports of the condition of 19 gardens have been received regularly this year and the main features of these reports have been consolidated and published in the Bulletin, where they are available to all member clubs of the United States Golf Association. The demonstration gardens continued to attract much attention from local turf enthusiasts and have been examined by large numbers of visitors during the year. Well-attended gatherings of golf club officials and greenkeepers have been held at the gardens and the behavior of the different grasses, fertilizers, and other treatments has been discussed on the grounds. At many of these meetings members of the Green Section's staff have been present to explain the work. It has been found that discussions of turf problems are much more valuable where such demonstrations are at hand than are discussions of similar problems indoors, where direct examples of results cannot be exhibited.

#### GREEN SECTION MEETINGS

The Green Section held no regular indoor meeting during the winter, as was customary in previous years. Instead an exhibit of the Green Section's activities was presented at the annual meeting of the United States Golf Association held in New York on January 10. This exhibit included a display of different types of fertilizers, seeds, soils, and other materials of interest in turf maintenance.

A series of outdoor meetings was held during the year as follows:

- April 3. Bay Shore Golf Club, Miami Beach, Fla.  
 July 7. Lochmoor Club, Detroit, Mich.  
 July 20. Arlington Turf Garden, Arlington, Va.  
 July 27. Charles River Country Club, Boston, Mass.  
 Aug. 3. Philadelphia Country Club (Spring Mill Course), West Conshohocken, Pa.  
 Aug. 4. Oakmont Country Club, Pittsburgh, Pa.  
 Aug. 10. Century Country Club, White Plains, N. Y.  
 Aug. 17. Sedgefield Country Club, Greensboro, N. C.  
 Aug. 19. Country Club of Virginia (James River Course), Richmond, Va.  
 Aug. 26. Hyde Park Golf and Country Club, Cincinnati, Ohio.  
 Aug. 28. Indian Trails Golf Course, Grand Rapids, Mich.  
 Aug. 31. Mid-West Turf Garden, Mill Road Farm Golf Course, Everett, Ill.  
 Sept. 8. Westwood Country Club, St. Louis, Mo.  
 Sept. 10. Tulsa Country Club, Tulsa, Okla.  
 Sept. 24. Municipal Golf Course, Niagara Falls, N. Y.



The Green Section's first southern meeting. Held at the demonstration garden on the Bay Shore Golf Course, Miami Beach, Fla., April 3, 1931

Nearly 1,200 persons interested in turf maintenance attended these meetings. The attendance at these outdoor meetings exceeded that of any previous year and there are ample indications that this type of meeting is becoming more and more valuable in carrying the Green Section's work to its member clubs, where it can be applied to the general betterment of playing conditions. The meeting on the course of the Bay Shore Golf Club, Miami Beach, Fla., marked the first Green Section meeting of this type held in the South. When its finances permit, the Green Section's staff will visit the Pacific Coast to organize meetings in that part of the country.

In addition to the above meetings sponsored by the Green Section, members of the staff of the Green Section were present at various other local gatherings of chairmen of green committees and green-keepers.

## GREENKEEPERS' SHORT COURSES

Last winter the Green Section's staff took part in the programs of the greenkeepers' short courses which were given by the Pennsylvania State College, State College, Pa.; University of Wisconsin, Madison, Wis.; and Michigan State College of Agriculture, East Lansing, Mich. The Green Section welcomed the opportunity to cooperate with these institutions in connection with their constructive educational programs in turf maintenance.



The scarred surface of a St. Louis putting green, indicating the damage occurring on turf in the Middle West during the past season

## CORRESPONDENCE AND SERVICE TO MEMBER CLUBS

During the year the Green Section's office in Washington conducted an unusually large amount of correspondence and service to member clubs. The usual difficulties experienced this past summer in maintaining turf throughout much of the country, particularly throughout much of the Middle West and southern portions of the bent-grass region, resulted in an exceptionally large number of inquiries from member clubs. The increased demand on the time of the Green Section's staff in attendance at the summer meetings resulted in an accumulation of unanswered correspondence in the Washington office, with the result that some delay was occasioned in replying to many of our member clubs which sought information. As far as it was possible, however, these requests for service were handled promptly. A good many samples of soil and seed were examined and reports rendered to member clubs. The Green Section's staff visited a large number of courses on request and gave advice on numerous turf problems. Due to the limited staff of the Green Section and the increased demand for advice through correspondence it was found necessary to refuse many requests for personal visits to courses to give advice on turf maintenance problems. During 1931

members of our technical staff visited courses located in Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Virginia, West Virginia, and Wisconsin. On the invitation of officials of the Royal Canadian Golf Association brief visits were also made to Montreal and Toronto. Steps are now being taken which will bring the green sections of our associations in much closer touch and cooperation with each other in the interests of better turf conditions and the more economical maintenance of golf courses.

#### GREEN SECTION BULLETIN

During 1930 the publication of the monthly Bulletin of the Green Section fell behind its regular schedule, due to illness of the editorial staff and certain increased demands on the time of the Green Section's personnel. Since the Bulletin does not pretend to be a publication for news items but is devoted primarily to information which is of permanent value, it was felt advisable to allow its publication to be delayed rather than to delay the more pressing needs of experimental work and service to member clubs. At the beginning of 1931 the publication was several numbers behind schedule. During 1931 the remaining numbers of 1930 were published as well as the complete volume for 1931, containing the usual number of pages. The plan of the publication this year has been the same as in the past three years; that is, related material is grouped in the individual numbers and in some cases in consecutive numbers. This system of grouping articles on related subjects makes the Bulletin much more convenient for ready reference at later time for readers who wish to look up material in back numbers. It also facilitates the work of the Washington office in answering correspondence, because when some one writes for information on a subject such as fertilizers, water systems, golf course construction, and the like, he can be furnished with a copy of the Bulletin containing a thorough discussion of the subjects by both practical and scientific men.

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Cooperative use of equipment is being practiced by farmers and may possess advantages for golf courses. Farmers with relatively small acreage in fruit or vegetables find that the purchase of expensive spraying equipment results in an overhead charge scarcely justifiable for the short period of the year over which the equipment is used. Groups of farmers have accordingly cooperated in the purchase and use of spraying equipment. Eight or ten farmers in one of these groups may by this means secure the benefit of the best modern equipment handled by men who are thoroughly competent, at a fraction of the original cost. Considerable advantages are derived from such a system, and the small producer is enabled to increase his crop yields by means of efficient spraying, at a reasonable expense and at the proper time. The idea suggests possibilities for neighboring golf clubs, where the burden of expense can be shared by several clubs rather than individually in the purchase and use of expensive equipment which is only occasionally needed.