



NEWSLETTER

FEBRUARY 1968

Golf Course Superintendents Association

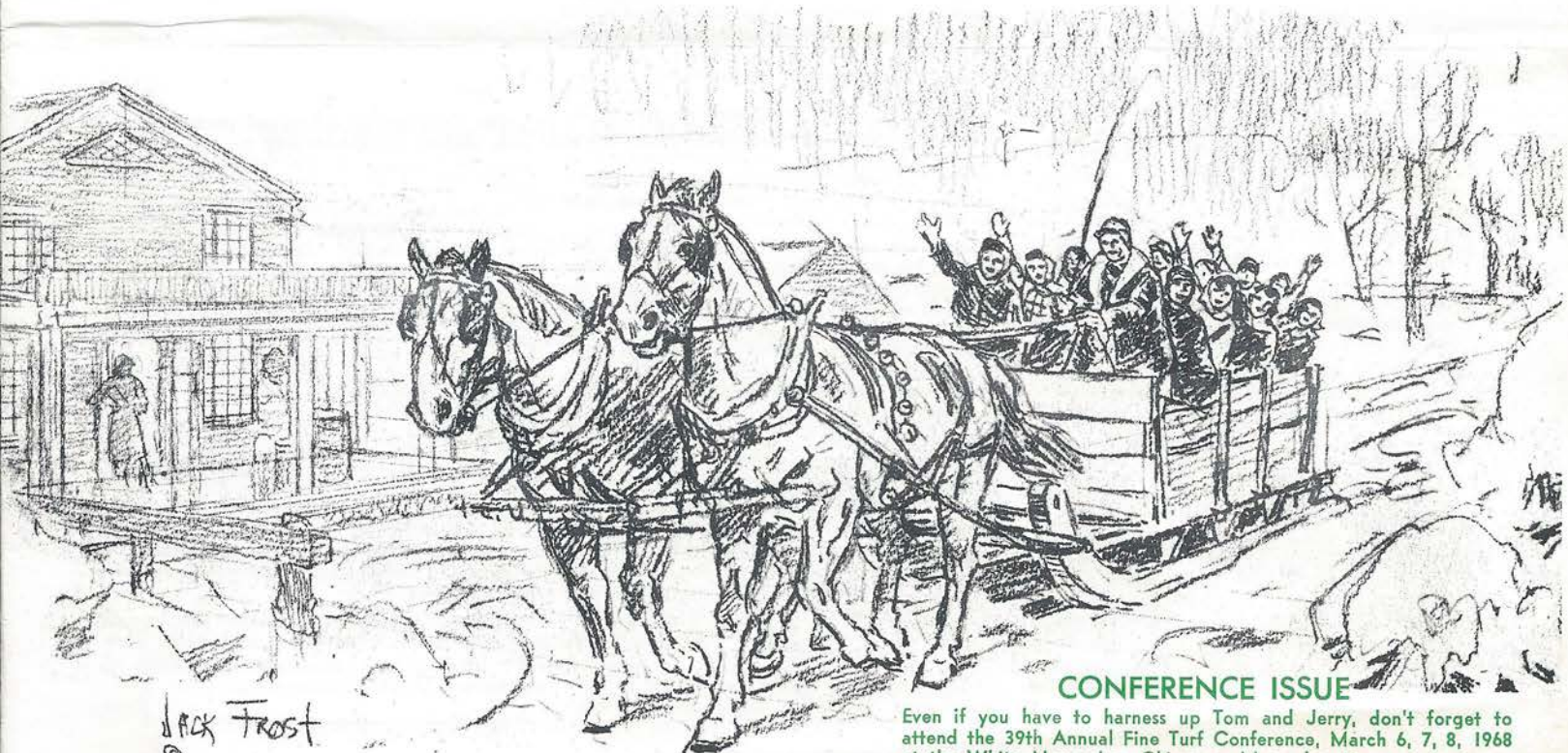
OF NEW ENGLAND, INC.

Golf Course Superintendents
Association of Maine



Golf Course Superintendents
Association of New Hampshire

Sponsors and administrators of the Lawrence S. Dickinson Scholarship Fund
Awarded yearly to deserving Turf Management Students.



CONFERENCE ISSUE

Even if you have to harness up Tom and Jerry, don't forget to attend the 39th Annual Fine Turf Conference, March 6, 7, 8, 1968 at the White House Inn, Chicopee, Massachusetts.

Golf Course Superintendents Association

CONFERENCE ISSUE

I would like to welcome the G.C.S.A. of Maine and the G.C.S.A. of New Hampshire to our expanding Newsletter. Two years ago the G.C.S.A. of New England was mailing out about 150 Newsletters, now, beginning this month we will be reaching approximately 500 Superintendents, Dealers and many club Presidents and Greenschairmen of New England.

Many of our own difficulties can be overcome through this "united newsletter." I am sure that many of our members and subscribers have problems, too. Why not write a letter to the editor expressing your views on different concepts of turf management. Maybe we could arrange a question and answer column for this purpose.

Our deep sympathies are extended to the families of Mr. Carlton Treat and Mr. Frank (Sandy) Hammond. Mr. Hammond was associated with the Unicorn Golf Club for many years before retiring.

Carlton Treat was superintendent at the Woodlawn Golf Club for 13 years and retired superintendent at the Mountclair Golf Club in New Jersey. He was also one of the founders of the "Greenskeepers Club of New England" in 1924.

PRIZE PR MAN

Gerry Finn, public relations director for the New England Golf Course Superintendents Association, has been named a winner in the national Brunswick-McGregor golf writing contest.

This is the third time in the past six years that Finn has earned such an honor. The record number of entries was screened by the University of Illinois School of Journalism staff and selected by members after close study of content and style.

Finn won for his description of Charley Sifford's victory in the \$100,000 Greater Hartford Open at Wethersfield, Conn. He received \$100 for his prize-winning story.

NEXT MEETING

The next meeting of the G.C.S.A. of New England will be February 5, 1968 at the Holiday Inn, Grove Street exit (128), Newton, Mass.

Directors' Meeting	10:15 a.m.
Regular Meeting	11:00 a.m.
Dinner	12:15 sharp
Educational Program	1:15 p.m.

I wish to extend an invitation to all the members of the N. E. Associations to attend this educational program. The speaker will be the provocative Allen H. Morgan, Executive Vice President of the Massachusetts Audubon Society. His topic will be: "Air and Water Pollution: Population Pressure and the Expanding Suburbia."

Blue Hills Has New Super

January 11, 1968

John Smith has taken over the Superintendent's reins at the 27-hole Blue Hill Country Club, in Canton, Mass.

"Jack" is a native of Holyoke. He took his placement training in the art and science of turf management at the Longmeadow Country Club. Mr. Smith is a product of the Stockbridge class of 1958. He was formerly Superintendent at the Holyoke and Indian Ridge Country Clubs. Jack is happily married. Mrs. Smith is a school teacher and they have two children.

THE OTHER ORVILLE

Orville Wright? Yah . . . he was pretty good. But we here in the land of machines that fly over greens and fairways, have our own Orville. And . . . he's pretty good, too.

There's only one Orville among us, that distinguished son of the sod — Orville O. Clapper who has joined hands with the golf course superintendent in a successful growing cycle from the pushcart to the propeller era.

Orville's been in the golf supply business for 45 years. A distinguished-looking pleasant gentleman, he looks like he just stepped out of the United States Senate chambers. What's more, he does that bit even better since he says something when he opens his mouth.



The transition of the superintendent from unrecognized common laborer to the high-rising position of professional man is part of the Orville Clapper success story. His father, John S. Clapper, was one of the founders of the Toro Company. "Of course", quips Orville, "Toro

has to be at the top of our line. But we're interested in anything which will advance the game, condition-wise and ease the burden of the superintendent in the process. We are very close relatives in that respect."

Orville came to New England from Minneapolis where his father pioneered the first mechanical aid in lawn mowing. Dad designed a rig which was pushed by a tractor. From there the mechanized means took over and some of the back-breaking aspects of care and beautification of the golf course were eliminated.

Orville likens the evolution of equipment to that of the state of the superintendent. "Everything seemed to progress in an orderly manner", he recalls. "I remember when the leader of the grounds crew, the man who was paid a few more cents an hour, was referred to as the boss. From there the position slicked up somewhat with the term 'greenskeeper.' Now with the creation of 'superintendent' the job is taking on new and well deserved attention. And, through it all, we must remember the contributions to society these dedicated men (superintendents) have made. In effect, through their determined fight to gain proper recognition, they have created a new profession."

The new look on the golf course has followed this drive by the superintendents. More and more young men are now looking to the profession as an opportunity to further themselves both financially and morally. The interest has caused a revolution in education where many universities and colleges have added degree-earning divisions to their makeup.

Orville is especially impressed with this gain. "I have seen some big steps taken by the superintendents", he tells. "I mention the transfer of purchasing responsibility from the greens chairman to the superintendent, the amazing increase in budgets which are now five times greater than they were 30 years ago and the general uplifting of the public's acceptance of this work as a science. Now with the educational factor added to these, it remains only for the men, themselves, to continue striving for bigger things."

There is a little of the soap box in this beloved man. "I know a lot of the boys won't

PRESIDENT'S MESSAGE

January 10, 1968

After having just recently encountered the episode of being interviewed for other positions as a golf course superintendent, I feel that we, as an association are sorely behind the times in this respect. We are not only behind the times individually, but also professionally as an association. Only when and if we, as individuals (Golf Course Superintendents) and as an association, can be fully informed as to each others position at his club, can we then become known as professional turf-grass managers. Greens chairmen from any club can acquire figures concerning your position at your club at any time. This is a proven fact. Many times these figures do not portray the full picture, nor include all fringe benefits.

On the basis that the chairmen can acquire these figures of surrounding clubs, why can't we (the golf course superintendent) have the true factual figures at our finger tips? This can only be accomplished if you would be willing to discuss budgetary operations openly and maybe end up filing your position with your fringe benefits with our association. With this factual information on file, you will have the proper knowledge of compensations in a particular area at all times.

Keeping your payroll figures to yourselves will only continue to keep you in the dark, will continue to hold the entire field back, with very slow progress financially and professionally.

It has taken many years of education through association, that ended the old antic of keeping the knowledge of growing turf a secret, by the old timers. Consequently today, green thumb secrets are non-existent and every superintendent is willing to help one another, in any phase of turf-grass management.

Unless we meet this challenge, we will be guilty of progressing too slowly . . . ADVANCE PROFESSIONALLY!

Anthony B. Caranci, Jr.
President

CHRISTMAS PARTY TO BE STUDIED

The GCSA of New England prexy appointed a study committee to seek out the pros and cons of continuing the annual Christmas party.

It was divulged at the last business meeting that only 19 Association members attended this gala affair. The other seekers of Christmas cheer were guests of the Superintendents and Friends of the Association.

The Study Committee will look into the matter of possibly having the Ladies' Night in the spring. Robert Grant, Lucien Duval and Leon V. St. Pierre will meet to study the above matter.

agree with me", he laughs. But I'm a firm believer in the possible two-shift program of the future. I can see a day crew and a night crew with assistant superintendents for each and a golf course manager overlooking the entire picture. We're going to become a streamlined outfit, more modern than we ever dreamed it could be."

Orville O. Clapper and the golf course superintendent. They're two of a kind. They are the backbone of a particular form of progress. They're inseparable.

Gerry Finn



Golf Course Superintendents of New Hampshire

PRESIDENT'S MESSAGE

With the expansion, rebuilding, and rapidly growing number of golf courses today, superintendents have found it necessary to form individual state associations. Although this is certainly beneficial for us to work and meet closely with our neighbor superintendents within the states, there has been a rift, a noticeable lack of communication between the state associations as the individual organizations have become closely knit.

Therefore, it is with great pleasure and enthusiasm that the New Hampshire Association joins with the New England and Maine Associations in the publication of the Newsletter. By sharing ideas and area news we can open the channel to better communication between the states. It seems unfortunate that in order to have a strong interstate organization, one must have weakened intrastate communication. Perhaps this mutual effort put forth in contributing to the Newsletter will help lead us to a clearer understanding and mutual respect which in turn will be instrumental in accomplishing our many goals.

Sincerely,
Robert Flanagan
President



Robert Flanagan, (left) presents William Barrett, (right) with a plaque commemorating his two years as president of the N.H.G.C.S.A.

THE FIRST PRESIDENT

After two energetic years, William Barrett, superintendent of Portsmouth Country Club, is stepping down from the presidency of the New Hampshire Golf Course Superintendents Association. As the first president of the association he is highly commended by his peers for being a true leader in the establishment and growth of the two-year-old organization.

William Barrett's enthusiasm and devotion have helped the association develop from its infancy to a group eighty members strong. Under his able leadership the New Hampshire Golf Course Superintendents Association has become chartered and corporated, affiliated with the Golf Course Superintendents Association of America, and has established a turf research fund. Even of greater significance is his guidance of this group of New Hampshire superintendents united in a tight bond of friendship and brotherhood.

January Meeting

The annual meeting was held at the Highway Hotel in Concord, on January 9, 1968, and the following were elected to office:

- President* — Robert Flanagan, Cochecho Country Club, Dover, N. H.
Vice-President — Leonard Chace, Charming-fare Links, Candia, N. H.
Secretary — Robert Hale, Kingswood Country Club, Wolfeboro, N. H.
Treasurer — Ronald Palmer, Plausawa Valley Country Club, Concord, N. H.

BOARD OF DIRECTORS

- George Hauschel, Rockingham Country Club, Newmarket, N. H.
Charles Pullen, Nashua Country Club, Nashua, N. H.
Lyle Cheney, Bald Peak Colony Club, Melvin Village, N. H.
Roland LaChance, Beaver Meadow Country Club, Concord, N. H.
Donald Bye, Province Lake Country Club, East Wakefield, N. H.

Joel McKone from Sawtelle Company was guest speaker. His informative discussion included tips on the safety, maintenance, and repair of golf cars.

Next Meeting

The next meeting will be held at our winter headquarters, the Highway Hotel, Concord, February 13, 1968.

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| Directors' Meeting | 10:00 a.m. |
| Regular Meeting | 11:00 a.m. |
| Dinner | 12:15 p.m. |
| Educational Program | 1:15 p.m. |

Mr. Bruce Vickory from the Connell Company will deliver the educational portion of the program, speaking on the repair and maintenance of small engines. Don't miss this one and feel free to bring the men from the shop.

PROXY VOTES

Members of the National are reminded to bring their Proxy votes to this meeting so that they can be sent in.

Winter Twig Tells Health of a Tree

Trees in winter have helpful hints for the arborist to observe and interpret. The length of twig growth, the color of bark, the size and health of buds all have meaning. By reading these signs, serious trouble can be avoided at a later date, reports Dr. Philip Rusden, a scientist of the Bartlett Tree Research Laboratories.

A twig in dormant condition can divulge a whole series of events that may have taken place over a period of years, says Dr. Rusden. A tree's health is generally normal if the distance between bud scars from year to year is uniform. A tree indicates unhealthy life if the distance between bud scars becomes progressively shorter denoting that the twig is making less and less growth each year.

The size and fullness of a winter bud reveal the current state of the tree's health. A shriveled bud is a tip-off that something has happened to the twig or

branch, or even the corresponding root below ground. Examine buds of two trees of the same variety. On one the buds may be fat, shiny, waxy and firm. On the other, weaker tree, the buds will be smaller in size, dull and less numerous.

Examine the bark of a twig, suggests Dr. Philip Rusden. Pimple-like eruptions or a peculiar spotting, he says, may be due to a fungus that has penetrated the living tissues. If the signs indicate your tree is unthrifty, search for the cause. Something may have happened to cause the tree to become weakened all at once, or the decline in vigor may be progressive.

Previous storm injury, damage to roots, malnutrition, the invasion of borers and bark beetles, or internal diseases, or the effect of leaf-eating insects and leaf-destroying fungi may be among the causes.

— Mass. Audubon Society



Golf Course Superintendents of Maine

IN THIS ISSUE the Maine Association welcomes its opportunity to contribute to the enlarged Newsletter. While we have much to contribute, mailing of the Newsletter to our membership gives us the better half of the bargain, so to speak, as we are confident that this increase in communication will help break down our isolation from the mainstream of thought in golf course management and superintendent association concepts and principles.

After an earlier attempt to form a Maine Association failed because a good number of leading superintendents moved "South" — a common occurrence here — a new effort was made during 1964 with bylaws drawn and officers elected. A slow start seemed further hampered by a lack of clearly defined principles and purposes plus the great geographical separation of superintendents. A very helpful move was affiliation with GCSA America which put us in touch with the outside world for the first time. As more members have held office or participated in Association business, it is clear that the Association is going to live, is growing, and groping positively for its principles and purposes. The surface has hardly been scratched, however, and we have a long way to go to develop Maine GCSA to contribute effectively to turf and golf course management, to increase the estimate of worth of the superintendent among golfers, and to influence golf itself within the state.

CURRENT OFFICERS are listed as follows:

- President*, John Davis, Superintendent
Riverside Golf Course, Portland, Maine
- Sec.-Treas.* Ernest Hawkes, Superintendent
Gorham Country Club, Gorham, Maine
- Southern Maine Vice President*, Roger Lowell,
Superintendent, Dutch Elm Golf Course,
Arundel, Maine
- Central Maine Vice President*, Paul Browne,
Owner, Natanis Golf Club, Vassalboro, Me.
- Northern Maine Vice President*, Austin Kelly,
Pro-Superintendent, Bangor Municipal Golf
Course, Bangor, Maine

Beginning with this issue the Newsletter will be mailed first-class near the end of each month to dues-paying members. For more effective communication, mailing will go also to Club presidents and green chairmen or other appropriate management officials of golf courses, be they owners or municipal officers. Members are urged to file with the Secretary the names and addresses of their Club presidents, green chairmen or other appropriate officials so that this additional mailing may occur. Mailing will also go to "Friends of the Association" and to a few others concerned with turf management.

December Meeting

The December meeting was held at Howard Johnson's restaurant in South Portland on the 14th. Ken Turner of Alco Rokeby Chemical Co. was the speaker and reviewed the use of chemicals in golf course management, especially for disease, insect and weed control. What with severe disease conditions of last year, there was plenty of interest in the subject and a lot to talk about.

January Meeting

The January 10th meeting was held in the same place, and Burt Anderson, as retiring program chairman, placed himself as main speaker and attempted to give an historical perspective of the Association to bring into focus its present status and help point the way into the future. Member response clearly indicated that the desirability of strengthening our Association is strongly held, and there appears a greater willingness to participate in shaping the Association future. Preliminary discussion about putting in a booth in the Portland Flower Show was held.

* * * *

While it is the responsibility of the Maine editor to keep our page filled each month, contributions from the membership will be most welcome. Some of the best items are inventive management techniques or devices, and it is quite likely that northern course management problems have been met with novel techniques that would be of interest to all readers. The editor would be pleased to get copy of such or other items from the members.

* * * *

MAINE'S GOLF COURSES

The 1967 issue of "Golf in Maine" published by the Maine State Golf Association lists 87 standard golf courses within the state. Of these, 65 are nine-hole courses, and considering current expansion and construction there are or will be 20 eighteen-hole courses and one of twenty-seven holes. Believe it or not, there is one thirteen-hole (13) course on Moosehead Lake at Mount Kineo that must be reached by boat. An immediate glance at the terrain, sneaked in between strikes while fishing on the lake, convinces one that expansion to eighteen holes is not feasible.

There are at least 5 par-three courses within the state, and of the nine-hole courses, a dozen are listed at less than 2500 yards. Most of these courses are old and made for the wooden-shafted club and "dead" ball but fit in nicely with today's semi-regulation or executive course so favored by tourists and golfers of low skill. From this range course length grades up to an average of 3000 to 3200 yards or 6000 to 6200 yards for eighteen holes. Several new courses under construction are within this length range, definitely avoiding the 3400-3500 or 6800-7000 yard "championship" length. The rolling land of most courses makes them difficult to score as the flat Florida or desert courses of "championship" length.

* * * *

1967

MAINE WEATHER SUMMARY

Winter was considered about average for the state with northern uplands being covered with snow by November 10 and coastal regions by December 20, 1966. Temperatures were not extreme, and those who persist in planting forsythias and peach trees in the Augusta area did see some blossoms above the snow line this spring. Snow disappeared by late March on the coast to mid-April in central regions and during May up north. Because of a very mild fall season, little frost got into the ground before snow cover occurred. As a result frost was out of the ground before the snow left and a severe snow mold outbreak occurred. Since most greens are not protected by fall applications of fungicides, there was a lot of snow mold throughout the state. Kill of green's turf through desiccation did not occur, as usual, because of a long duration of snow cover, but kill from ice cover on annual bluegrass was about average, but which would be high for Massachusetts. It could be said that were Maine a major golfing area, winter-kill on greens would have been "discovered" long ago rather than just a few years ago in the Chicago area.

In common with a trend that winters start and finish later than they did formerly, the spring season here was spectacularly late, with cold and snow throughout April and May. Precipitation was high greatly hampering maintenance operations for spring start-up. Delayed opening of courses went far beyond the usual and golfers stayed home until warmer times.

Summer was similar to that experienced in southern New England and New Jersey. During July, Portland airport, like Atlantic City, New Jersey, had 4 days of sunshine. This trend ameliorated during August and September, but rainfall continued high hampering operations and quelling completely all talk of new water systems to include fairway watering at those courses that really need such new systems. Fortunately, temperatures ranged a few degrees lower than in southern New England so that disease outbreaks were far less severe although more than average. Dollar spot broke out eventually and persisted throughout a mild September and October. Large brown patch occurred several times—much above average, as it usually occurs very infrequently or not once in central and northern Maine. Generally it was a humid summer, very typical and deplored by tourists, residents, and transplants who rejoice over the usual continental summer weather.

As with southern New England, while the averages show milder weather than usual, early snowstorms occurred but snow cover did not persist. Central Maine as well as the coast had bare ground until December 28th when the first good storm occurred. Usually this area is covered by December 1-15. Light snow persisted up north to help track deer in November, but not in southern Maine. There is a fairly good frost penetration which may indicate that snow mold outbreak will be reduced next spring.

* * * *



DICK BLAKE PROFILE

Initiative, intelligence and personality — these ingredients planted into another Winchester politician (a fellow named Volpe is the other) have ganged up to make Dick Blake one of the most well-known and respected Golf Course Superintendents in the country.

Blake at the still ambitious age of 38, is almost a legend in his own territory of New England where he has skipped up the ladder as newsletter editor, director and first vice-president of the New England Golf Course Superintendents' Association.

It is on the national level where Blake is staking his next claim. Come February and far off San Francisco, Dick will be shooting for the vice-presidency of the National Association (G C S A of America). His campaign will have solid direction under the enthusiastic guide of Leon St. Pierre and Tony Caranci — a couple of pretty successful vote-getters.

"My platform," Blake explains, "is a step in streamlining the profession. I'm fighting for recognition of golf course management as just that — an honorable profession, and I'd like to see more emphasis placed on the educational as well as the practical aspects of our work."

Blake's background is a steamroller of success. He came out of Stockbridge School, University of Mass. 15 years ago, bulging with ideas. He put them to work starting with placement training at Concord C. C., then on to Salem C. C., went on to Webb Brook, to Whitinsville and his present second home, the Mt. Pleasant C. C., Boylston where he has made playing conditions enjoyable for members since 1960.

On the civic front Dick outdoes himself. In the town of Boylston he is chairman of the Conservation Commission, a member of the Land Development Commission, and an elected member of the Planning Board. He is active in Lions, Masons and Shriners and his church, serving for several years on the Stewardship Committee.

The chances of Blake coming back from the West Coast as national vice-president are slightly more than remote. Two years ago at Kansas City, Dick, nominated a Director from the floor, won in a landslide, making him the first in the history of the Association to win office under those conditions. Incidentally, Dick's meteoric campaign then was handled by St. Pierre.

Blake, as noted before, is a pleasant combination of ambition and personality. Of the upcoming election, he says, "my opponent is a good man, from Ohio, but we're out to win."

RESERVOIR AT MT. PLEASANT

Mt. Pleasant C. C. has just completed the construction of a 12-acre irrigation reservoir on its property in Boylston, Mass.

After considerable investigation of several sources of water supply, including the purchase of municipal water, it was decided to construct the reservoir at its present location, which is a swampy area in a natural valley.

This 20-million-gallon impoundment will furnish enough water to completely irrigate the entire golf course. Almost one square mile of water run off drains into this pond. Since 1960, Dick Blake, the golf course Superintendent, has installed over 4 miles of underground drainage pipe and 2 miles of surface drains. All of this water is diverted into this pond.

Technical assistance was furnished by the Soils Conservation Service after a request made by Mr. Blake to the North-eastern Worcester County Conservation District. Civil engineer Miles "Jeff" Hubler of Belchertown, Mass. was also engaged to provide engineering services.

Before actual construction could begin, it was necessary to obtain approval from the State Department of Natural Resources and the State Department of Public Works, Division of Inland Waterways. Copies of the plans and specifications were also submitted to the Boylston Selectmen, Planning Board, Board of Health, and Conservation Commission for study and approval. The above requirements were necessary due to a recently enacted state law ("Hatch Act") which has to do with the changing of certain water courses and wetlands. It was also necessary to obtain the approval of the County Commissioners because of the size of the reservoir.

An experienced and competent contractor was hired. His equipment included a 32-ton-dragline, 55 feet of boom and a 1-cubic-yard bucket and pontoon mats, a 13-ton bulldozer, a 4-cubic-yard pay loader, and several large dump trucks. Approximately 30,000 cubic yards of material was moved to build this 13 foot high, 1700 foot long dam. The material moved was ideal core material and was close by.

The prefabricated principal spillway is a drop inlet type system. This is made of corrugated metal pipe, bituminous coated and water tight. The 10-foot riser is 42 inches in diameter, the tube thru the dam is 30 inches in diameter and 60 feet long, the riser has a debris shield 66 inches in diameter by 24 inches high. A gate valve was installed should the pond ever need to be drained. An emergency spillway was constructed in undisturbed earth off one end of the dam which has a bottom width of 50 feet and 3:1 slopes. Seeding of the dam and spillway will be completed in the spring.

Because it was planned not to excavate all of the pond bottom at this time, it was necessary to dig a channel 1400 feet from the dam to the sump area which is 100 ft. by 100 ft. by 14 ft. deep, where the pumping station is to be built. The pumping station will consist of two 50-h.p. 500 gallons per minute pumps, also a 20-h.p. jockey pump and controls to operate a fully automatic double row fairway irrigation system as well as tees and greens.

Future plantings will be made at the pond site to further enhance the natural beauty and for wildlife habitat improvement.

In the future it is hoped the reservoir can be used for skating, boating, fishing and eventually swimming.

a **DIRTY** story ...

a few DEFINITIONS

COLIFORM BACTERIA — microscopic one-celled animals that live in intestines. Most are harmless, but in water they prove the presence of raw sewage. So the coliform count is simply a convenient measure, like degrees Fahrenheit; the higher it gets, the more polluted the water is.

GUNK — the unexpected product of two or more harmless chemicals that combine to form a Frankenstein-style pollutant.

ORGANIC MATTER — anything coming from living organisms. It includes coal, for instance, as the product of long-dead plants as well as nearly everything that empties into a septic tank, except detergents and other chemicals.

PRIMARY TREATMENT — screens and settling basins that take out the solids and about 35 per cent of the organic wastes from incoming sewage (but have no effect on its chemical content).

SECONDARY TREATMENT — a process of encouraging bacteria to destroy the organic wastes which the primary treatment has not removed.

SLUDGE — black tarry stuff left at the bottom of sewage-treatment settling tanks. It makes excellent fertilizer — sold as Milorganite, it pays for much of Milwaukee's sewage treatment. And it is so combustible that it can be turned into a gas and used to run machinery.

RAW SEWAGE --- untreated sewage.

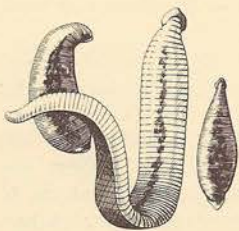
visible EVIDENCE



BROOK TROUT



CARP



TURTLE AND HORSE LEECH

ALL water may be H₂O but clean water has a lot more of the O. As the content of dissolved oxygen goes down, so does the quality of the water. By the time water has reached the stage of being "too thick to navigate, too thin to cultivate" all useful oxygen has disappeared.

Experts can make pretty accurate guesses about the degree of pollution by taking samples of what lives in the water. A general rule of thumb with animals is: the greater the variety, the less the pollution.

Gamefish need plenty of dissolved oxygen, so as pollution creeps in, they are the first to go — trout, bass, bluegills, even the humble perch. When the gamefish have disappeared, the habitat is taken over by carp, suckers, and other trash fish which don't need as much oxygen. One step further down only animals like bloodworms, leeches, and snails can survive. Finally the time comes when no animal lives in the water.

Plants have their order of succession too. Very clean waters such as mountain streams or Lake Tahoe 50 years ago support only microscopic plants, aquatic mosses and liverworts. By the time the bodies of generations of these plus other natural debris have formed bottom mud, aquatics like certain species of pondweeds and waterwort (Elatine) begin to grow near the shore. At about the carp stage we get masses of green algae, duckweed, and water milfoil. With more pollution even these slowly disappear. And when things get too strong even for duckweed, when the leeches and bloodworms have also vanished, the sole living survivor of the dying water may be some pollution-tolerant species of blue-green algae — provided the poisonous wastes from paper mills, steel works, and chemical factories do not extinguish every form of life.



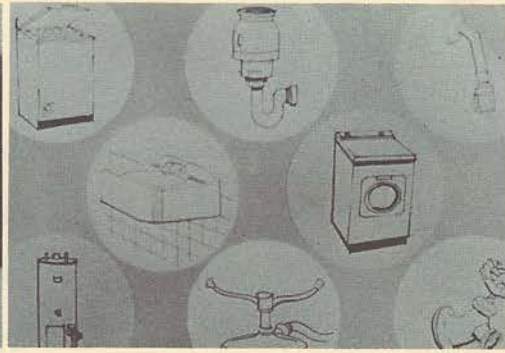
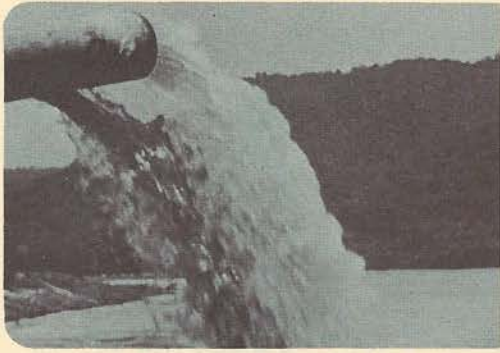
WATER LILIES



WATER MILFOIL



BLUE-GREEN ALGAE



the things that POLLUTE

KING Sennacherib of Assyria punished Babylon by dumping rubbish into its canals. Today our enemies don't poison our waters; we do it for ourselves.

Pollutants begin at home with what is called sanitary sewage from bathtubs, washing machines, and all the rest. In ancient times the average person needed only three or four gallons of water a day to keep clean and contented. Now the figure has jumped to 50 gallons (60 to 70 in urban areas), and there are millions more of us. Twenty or more *billion* gallons of dirty household water go down the drain every day and from there, as a rule, into the nearest river, with or without treatment.

Industrial wastes pollute at least twice as much water as all municipalities combined. It takes 200 gallons of water to make one dollar's worth of paper, about 500 gallons to make a yard of woolen cloth, and 1400 for a dollar's worth of steel — all necessities. Industries add variety as well as quantity. Washed into convenient watercourses are ammonia compounds, pickling liquors, dyes, by-products of pesticides, cannonballs of oil and grease, and many new chemical substances that are twice as hard to remove as any that were known twenty years ago.

Farmers are responsible for another series of pollutants. Their fertilizers seep into local water supplies and sicken great lakes. Every year millions of pounds of herbicides and pesticides enter streams and wells, travel great distances, and kill birds, fish, and mammals along the way.

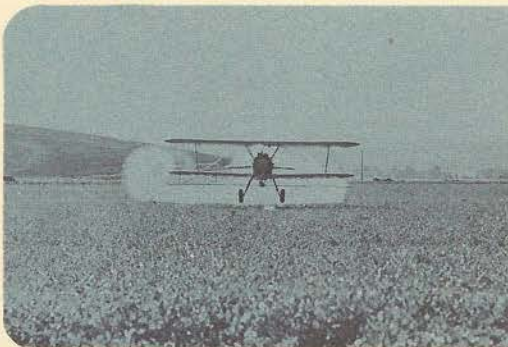
For further variety, customs change and new sources of pollution appear. Boating is an example. In 1940 we had two million boats; today we have more than ten million. Naturally, they are concentrated in the most attractive bodies of water. Sanitary problems have been brought under some control by government regulations but pollution by gasoline and oily wastes continues.

Salting highways to melt snow and ice in the winter saves so many lives that it must be continued. But of all pollutants salt is one of the hardest to remove — think of the unsolved problems of desalinating ocean water — and salty meltwater is getting into groundwater wells. Weston's wells located near the interchange between the Massachusetts Turnpike and Route 128 were recently abandoned because of salt; Howard Johnson's Restaurants along the Turnpike are drilling new wells far from the highway to get salt-free water.

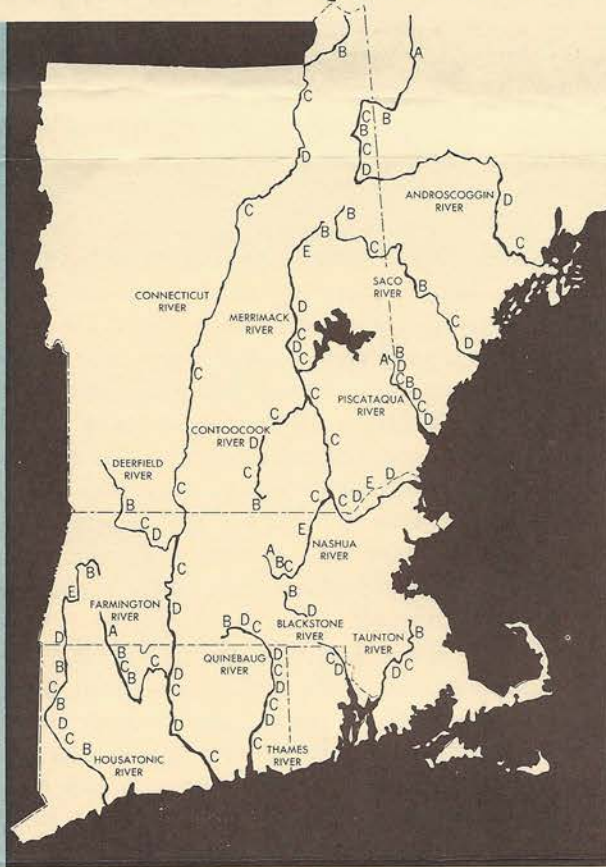
Although it is hard to realize, abnormal heat is a major pollutant of water. Many industries including the electric utilities take huge amounts of water daily from lakes and streams for cooling purposes. The water circulates through pipes or splashes over them and is then returned to the waterway with nothing except its temperature changed. While a 30-degree increase is fairly common, the temperature of one unlucky Ohio river has been known to reach 140°F. Heat lowers the oxygen content of water, makes it unfit for fish, allows plants to grow too luxuriantly and decompose even faster, and without the addition of a single conventional pollutant kills the waterway.

Storm-water runoff has recently been added to the list of serious pollutants. This is the water that doesn't soak into the ground after a heavy rain but instead races down gutters, washing everything with it, and into storm drains. What happens next varies from one city to another, but the net result is usually that either all the runoff or some runoff plus some raw sewage is sent untreated into nearby waters.

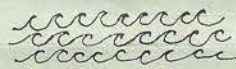
"Water washes everything clean" was the old theory. The first careful studies of storm runoff, made a year or so ago in Cincinnati, showed that instead of washing anything clean it probably accounts for 25 per cent of river pollution. The Federal Government is now providing \$60 million to find better ways of dealing with storm runoff. And some of the money is going into rural areas because nobody knows what happens to runoff there.



THE PRESENT QUALITY OF NEW ENGLAND WATERWAYS



A



B



C



D



HOW WATER IS RATED

Class A: any use including drinking — and only a few miles of river in all New England qualify.

Class B: fit for drinking after chemical treatment and fit for swimming and for irrigating vegetables that are eaten raw. Our B stretches have a surprisingly short life even in the north woods before they are succeeded by Class C.

Class C: fit for boating (the only recreational use) and for the irrigation of crops that are always cooked. In mileage this is our most common water.

Class D: suitable for the transportation of sewage and industrial wastes without nuisance. In our rivers it often alternates, stretch for stretch, with Class C.

Class E: open sewer, omitted from the list of standard classifications, but still it can be found on the map.

The "Trolling" Season

Dr. Troll

Maybe it's too much of a facetious play on words. Nevertheless, "the Trolling season" is almost upon us. This is supposed to mean that come March 6-7-8 at the White House Inn in Chicopee Dr. Joseph Troll will enlighten the profession with another calendar must — the 39th annual Fine Turf Conference.

This is Dr. Troll's baby and he spoon feeds it so effectively the conference has developed into one of the largest of its kind in the country. "We had 675 looking over the landscape last year", Joe preaches. "This year we're expecting more. It should be our greatest conference."

If you haven't happened upon Dr. Troll (and from here on the formality must be reduced to calling him 'Joe' at his request), you are not part of the superintendents' program. The man is one of the genuine friends of the profession. Once more, if ever there is created a hall of fame for the tops in the turf field. Joe must be afforded initial consideration. This is what he means to all of us.

Naturally, Joe is hot on the three-day whirl at White House. And it is very difficult to divert his attention from that venture to his own impressive list of accomplishments. This he did let slip . . . but only after Gestapo-method interrogation:

Joe has been on the University of Massachusetts staff for 10 years after earning his Ph.D. there. He is in the college of agriculture, department of plant and soil science . . . but he concentrates on the golfing program which includes several courses in turf management. It is here that he excels, that he has been so much help to the profession.

Most of the recognition bestowed on Joe comes from the results of his crackjack students from U.M. Most have experienced meteoric trips to the top of the field and all have their college prof to thank in one way or the other. Joe's recommendations for jobs are held sacred all over the country. He has been instrumental in the filling of hundreds of topgrade positions.

Then, too, he has been the chief driving force behind the firming up of relations between the golf course superintendents and the Massachusetts Golf Association. In that particular phase of life his contribution is immeasurable.

Joe Troll seems to revel in his voluntary dedication of self to the furtherment of the golf course superintendent's aims and goals. An appreciative note could be sounded loud and clear if everyone joins him for the conference in March. He would delight in a record turnout. That's his way. There is only one Joe Troll.

Gerry Finn



Dr. Richard Skogley (left) of the University of Rhode Island and Dr. Joseph Troll (right) of the University of Massachusetts.

University of Massachusetts ANNUAL FINE TURF CONFERENCE

White House Inn, Chicopee, Mass.

Wednesday, March 6, 1968

GENERAL SESSION

Chairman: Mr. Anthony Caranci, President Golf Course Superintendents' Association of New England

- 11:00- 1:00 Registration
- 1:00- 1:15 Greetings — Assoc. Dean Fred P. Jeffrey
- 1:15- 2:00 1967 Turf Problems, Mr. Alexander Radko, Eastern Director USGA, Green Section
- 2:00- 2:45 Remedies for 1967 Turf Problems, Mr. Lee Record, Agronomist USGA, Green Section
- 2:45- 3:00 Break
- 3:00- 3:45 Southern Turfgrass Production and Problems, Dr. Ralph W. White, Jr., Agronomist-Turf, Southern Turf Nurseries
- 3:45- 4:30 Canadian Turfgrass Production and Problems, Mr. David Moote, Superintendent Rosedale Golf Club
- 4:45 Massachusetts Turf and Lawn Grass Council, Business Meeting
- 7:30 — Hopefully — interesting films or possibly a tour of Spaulding Company

Thursday, March 7, 1968

GENERAL SESSION

"Current Turf Research and Development at Home and Abroad"

Chairman: Mr. Anthony Caranci

- 9:30-10:15 Turf Research Abroad, Dr. C. R. Skogley, University of Rhode Island
- 10:15-11:00 Turf Research at Home, Dr. Victor B. Youngner, University of California
- 11:00-11:45 Commercial Turf Research, Mr. James A. Simmons, O. M. Scott
- 11:45- 1:30 Lunch

GOLF COURSE SESSION

"Costs and Labor Management"

Chairman: Mr. Anthony Caranci

- 1:30- 2:15 Reducing Costs in Labor Management, Mr. Tom Mascaro, West Point Products
- 2:15- 3:00 Labor Management — Superintendent's Viewpoint, Mr. Sherwood Moore, Superintendent Woodway Country Club
- 3:00- 3:15 Break
- 3:15- 4:00 The Reluctant Human, Prof. John Denison of University of Massachusetts
- 4:00- 4:45 Alcohol and the Worker, Mr. G. E. Osburn, Hercules Company
- 7:30 Banquet, White House Inn

Friday, March 8, 1968

GOLF COURSE SESSION

"Design, Construction and Renovation"

Chairman: Mr. Geoffrey Cornish, Golf Course Architect

- 9:30-10:00 Contemporary Design Standards, Mr. Geoffrey Cornish, Golf Course Architect
- 10:00-10:30 Construction — Superintendent's Viewpoint, Mr. Robert Grant, Superintendent Brae Burn Country Club
- 10:30-11:00 Construction — Contractor's Viewpoint, Mr. David Canavan, Moore Golf, Inc.
- 11:00-11:30 Renovation, Mr. Paul E. Weiss, Superintendent Concord Country Club, Penna.
- 11:30 Questions and Answers

Beauty and the Beast

Dr. Skogley

The overworked phrase — beauty and the beast — wasn't invented by Dr. Richard Skogley but it wandered in and out of his interesting visual and audio presentation of golf courses, Great Britain style, during the association's January meeting at winter headquarters on Route 128.

The scenery of the British layouts comprises the element of the beauty. Then, on the other hand, the beast very well could be construed as a qualified description of their condition.

Dr. Skogley, a respected member of the University of Rhode Island staff, made the grand tour of the golf world on the other side of the Atlantic.

The qualified beast tag becomes necessary in that Dr. Skogley found one course which left a strong impression with him during his energetic travels. That would be the 45-hole compound known as Gleneagles. "This was the finest of all the courses over there", Dr. Skogley revealed. "Everything was very effective. And . . . it was in immaculate condition."

Slides of his trip back up Dr. Skogley's opinion in the case of Gleneagles. However, for the most part, his interpretation of scenery and condition was very much in evidence during close study of the other film shots he presented.

One of the more eye-opening observations of Dr. Skogley concerned the actual playing of the game in Britain. He noted, that because of a combination of conditions and unpredictable weather, the British concentrate on speed rather than score. It naturally followed that the biggest maintenance problem would be water, not lack of it but an overabundance of same.

Dr. Skogley also made note of the fact that courses are built on non-productive land, giving indication upkeep probably is hindered by it. The incessant emphasis on the findings of a high percentage of poa annua brought Dr. Skogley to the justifiable conclusion that the British have little in the way of preventative programs. "They seem to place all concern on the cure, rather than prevention," he disclosed.

Later in direct question period Dr. Skogley revealed a marked difference in social and financial status of the superintendents in Great Britain and the United States. "Over there the superintendent would be like a common laborer here", he said.

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Gerry Finn

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South Windsor, Conn.

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Springfield, Massachusetts 01101

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- Turf Research* — Lucien Duval, Chairman, Melvin O'Kelly, Dr. Joseph Troll, Arthur Anderson, ex-officio
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- Parliamentarian* — Philip Cassidy
Anthony B. Caranci, Jr.



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420