

fairways at Butler National on 4 inch certers. The nurse crop seeded was oats. The following year poa annua filled in the voids where the oats had been. Just suppose the nurse crop had been some of our new ryegrasses. The allyopathic reaction of the ryegrasses would have suppressed the germination of the poa annua seed.

G. Conditioning

In 1986 we narrowed and contoured the fairways on our South Course. The rough was allowed to reach 1³/₄ inch to accent the fairways. An expanse of rough was left in front of each tee for the golfers to carry. We found these alterations did NOT slow up play, in fact the golfers requested to play this course.

In 1988 the program was extended to all 45 holes. The rough was allowed to grow around the bunkers, and behind the greens Par 3 holes were all rough except for the approach area. Our fairway acreage had suddenly diminished to 70 acres.

H. New Equipment

May 1988 saw the arrival of new machines. It meant the immediate retirement of tractors pulling gang mowers. We decided to use the TORO 450 diesel, five gang, on the 12 South Course fairways. The two Ransome 350 diesels were delegated to the 15 North Course fairways. The Ransome 213 triplex mows collars and front approaches on the entire links. These machines were selected for their sturdiness not their weight. We discounted baskets for we had no intention of collecting grass clippings or poa annua seedheads.

The mowing height of the Ransome units is set at 1 3/16 inches, considering the weight of the Wiehle rollers out front, and the down-pressure exerted on the units by the hydraulic rams, the fairway grass is at a tight one inch.

The change in the golf course has been awesome. The uncut grass laid down by the tractor wheels has disappeared. The tall grass that remained uncut in tile line depressions is now severed by the floating mowing units.

The old routine of mowing the entire golf course on Friday, and then resuming on Monday morning has been abolished. Golfers paying premium fees felt cheated on Sunday afternoons, their golfball nestled and hidden in bluegrass that hadn't been mowed since Friday morning.

We now mow at least five times a week, and that includes Saturday evenings. If dark sets in on Saturday before the backnine is completed, the unfinished fairways are trimmed Sunday morning. The secret is to mow more frequently and remove less leaf blade.

This season we striped the fairways lengthwise for the weekend and mowed at various angles on the weekdays.

The person mowing collars and approaches with the triplex had a more difficult chore. There were yellow cart ropes to move, direction arrows to replace, sandtrap rakes in his way, etc. Two days were needed to complete collars and approaches, so these areas were groomed three times a week.

The investment this year of \$100,000 in modern equipment has been gratifying, complaints are seldom heard, an occasional compliment is forthcoming.

I mentioned earlier the finest bluegrass fairways in our area were at Aurora CC, Briar Ridge CC, Prestwick CC, and Turnberry CC. These courses had turf density, rich color, disease free, and groomed to the nth degree.

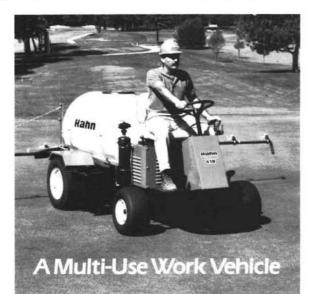
The sad truth is ... in each case these clubs have recently renovated and seeded their fairways to creeping bentgrass. The low-handicap minority has won another round.

Is the graffiti on the wall for bluegrass fairways?

Etched here at Silver Lake a granite headstone stands. It reads: "Here lies old Kentucky Smith

His mother wanted him to be a dentist."

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Upcoming Events — Mark Your Calendar

January 3 & 4 - MAGCS/GCSAA Seminars at Pheasant Run

January 9 — MAGCS monthly meeting at Arrowhead C.C.

January 16 & 17 - Michigan Turfgrass Conference, Lansing

January 20-22 - Mid-Am Hyatt Regency, Chicago

January 23,24,25 — Midwest Regional Turf Foundation Seminar, Indianapolis

February 6-13 - GCSAA, Anaheim

Changes, Openings and Positions Needed ...

Changes: Gary Hearns from Oak Brook C.C. to Country Lakes; Kerry Sattherwhite, assistant at St. Charles C.C. to Kishwaukee C.C.; Danny Quast from Milwaukee C.C. to Medinah C.C.

Openings: Read above. Bill Aiston, Supt. at Lake Shore C.C. is looking for an assistant. Send resume to 1255 Sheridan Rd., Glencoe, IL 60022.

Greenkeeper Needed. Wood Dale Park District, 2 executive 9 hole courses. Experience as an assistant for 3 years. Salary range \$19-25,000. Contact: Jim Berousek, P. O. Box 193, Wood Dale, IL 60191. Phone (312) 595-9333 or 773-0184.

Position needed: Scott T. Armstrong is looking for an assistants position starting in January. He is a recent graduate of Michigan State University. Has experience on a couple of golf courses — one, Flossmoor C.C. with Ray Schmitz. Call (312) 532-2961.

Editor's Note: I apologize for deleting Mark Johnson's name from the picture of the 2nd place winners from Michigan State in the Collegiate Golf Championship held at Lake Barrington Shores.

Congratulations to "God's Boss" Dr. Al Turgeon on receiving the Distinguished Service Award from the Illinois Turfgrass Foundation. Dr. Turgeon was one of the main people responsible for getting the ITF started and on the right track. (For those of you who may not understand "God's Boss", it is in reference that Dr. Turgeon is over Dr. Joe Duich at Penn State. This is a direct quote from the ex-president of the ITF Pege Leuzinger.)

This issue of **The Bull Sheet** is the 500th issue of our publication. A great deal of "Thanks" need to be given to our advertisers for making this possible. It is only thru them that we are able to continue to publish on a regular basis and provide information to our membership. Another "Thank You" is due to Ever-Redi Printing in LaGrange who has been our only printer over all these years.

"January

Starts another Year, begins another Season, Anxious perspective, what a great reason.
While the New Year unfolds the unknown, The Superintendent fights being unthroned.
Like the Rodeo rider sets His Mustang, The Superintendent must His Foe defang.
It's the same battle, fought every year, Weather vs. Superintendent, is very clear.

Kenneth R. Zanzig

The Illinois Landscape Contractors Association will sponsor their Landscape Design Course '89 on Monday, Tuesday, and Wednesday, January 16, 17 and 18, 1989, at Pheasant Run Resort, St. Charles, Illinois. Three levels of classes will be offered using lectures, slides, and in-class projects to focus on the exterior landscape.

Each day will feature beginning classes for those interested in learning the basic principles of landscape design, or intermediate classes if the basics are known, but there is a need to increase knowledge through practical application, or advanced for those experienced in design, but needing to sharpen graphic skills to better communicate concepts and finished designs to clients. All are taught by an experienced landscape designer/architect staff, coordinated by Bill Nelson, Professor of Landscape Architecture and Horticulture, University of Illinois-Urbana.

For information, contact ILCA at 2200 S. Main Street, Suite 304, Lombard, IL 60148, 312-932-8443.

Congratulations are in order to John Turner in being elected President of the ITF for 1989. John at the present holds the office of President in two of our local turf foundations, the other being the Midwest Regional Turf Foundation at Purdue.

FOR SALE — 1986 Jac HF-5. 10 blade reels, grooved rollers and catchers. 725 hours - \$18,000. 1982 Ryan Greensaire II, good condition - \$2,000. 1964 Ford Hi-lift, good condition - \$4,500. Contact Kurt Galisdorfer at Exmoor C.C., (312) 433-1177.

Congratulations to Joel and Debbie Purpur on the birth of their daughter Kailey Ann on December 16, 1988. She weighed in at 7 lb. 2 oz. Also Bruce and Roxanne Williams had a baby boy on October 4th, 1988. David Williams is bound to be the third generation superintendent!

Assistant Superintendent & Mechanic needed at Royal Fox Golf Club. Contact Tom Jauch, (312) 377-9491.

.....

FOR SALE — 10 1980 Harley Davidson Electric golf carts with charoers. Batteries only one year old. Excellent condition - \$450 each. Contact Joel Purpur at (312) 941-1651.



Soil — The Miracle We Take for Granted by Peter Steinhart

It is one of America's most vital resources — a foundation of life. Every cubic inch holds a billion beneficial creatures. Yet we bury it under concrete and let it wash away. We poison it and neglect it, and then play politics with it. We treat it like dirt, though clearly we can't survive without it.

Of all the Earth's resources, the one we take most for granted is soil. It is everywhere around us, brown and prosaic, so easily found and so easily wasted. Perhaps that's why many of us think of soil only in the abstract — as something farmers use to feed us.

Those of us who live in cities are aware of soil only when it becomes dirt, smudged onto our clothes after a picnic or carried into the house on our shoes. Then it is considered matter out of place and something to get rid of.

We bulldoze it out of the way to make highways and to erect shopping centers. We ignore its fragility when we cut timber or build houses on hillsides. And then it comes back to haunt us when it clogs our drains, clouds our drinking water, causes floods or simply falls away beneath the footings of our homes.

The truth is that soil is a resource of astonishing balance, complexity, beauty and frailty. If we could narrow our vision down to microscopic scale and tunnel into the top few inches of earth, we would be dumbstruck with its mystery and vitality.

There is enormous variety to soil. Experts say there are some 15,000 different soil types in the United States, and perhaps hundreds of thousands worldwide. They differ on the basis of the kind of rock that weathered into clay and sand to form the soil, the mix of organic matter inside it, the amount of water, the texture and the age. There are rust red soils of the tropics, from which most of the soluble aluminum and iron has been leached. There are dark brown loams in the U.S. Midwest that are made of materials scoured off the top crust of Canada and pushed southward by ancient glaciers. There are North American soils built largely from ancient silts, blown here from

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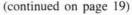
Asia on prehistoric winds. There are places where the soil is 200 feet deep and places where it is but a thin film on top of rock.

Living soil is full of air passages that let oxygen, carbon dioxide and nitrogen circulate. A well-aerated soil may be almost half airspace by volume. There are acres of surface area on the particles of sand and clay. Films of moisture cling to those surfaces, forming ponds and atmospheres that nurture a vast array of bacteria, fungi, viruses and protozoans. A cubic inch of soil can contain literally billions of creatures.

We know many of these organisms because they cause or cure disease. The bacterium *Clostridium tetani*, for instance, causes tetanus, while another, *Clostridium botulinum*, causes botulism. Soil fungi have given us penicillin. Actinomycetes, which are responsible for the sweet toasty aroma of freshly turned earth, provide such useful antibiotics as streptomycin.

But the teeming life of the soil has far more powerful significance than disease or medicine. For it is the bacteria and fungi in the soil that break down the complex molecules of dead organic matter, the cellulose and lignin of wood and leaf, into molecules which plants can use for food. Only the microbes can take the salts out of soil minerals and make them available to plants. Only bacteria can oxidize ammonia into nitrite.

There are other soil creatures with which we are more familiar. Moles and earthworms, burrowing crickets and insect larvae all tunnel through the soil, moving vast amounts of dirt, rearranging it, compacting it here and opening up air and water passages there. Their digging continually changes the habitat for microbes. One day there may be billions of one kind of



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1989 Board of Directors. L to R: Mike Bavier, Ray Schmitz, Tim Kelly, Roger Stewart, Bruce Williams, President - David Meyer, Joel Purpur, Mike Nass, Al Fierst, and Dennis Wilson.



Dr. Al Turgeon, recipient of the Distinguished Service Award from Illinois Turfgrass Foundation



President David Meyer presenting outgoing President of the ITF Peter Leuzinger with a check. Applauding is John Turner, the new ITF President.



Dudley Smith presenting the winners trophy to the Collegiate Champions for 1988 to the winning team of Purdue. Accepting the trophy is Don Cross, John Turner and Phil Taylor. Absent was Tom Vieweg.



Mike Hart and Tracy Earles



Jim Evans, Dave Louttit, and Leon Hartogh



Must be serious business. There isn't a smile in the group.



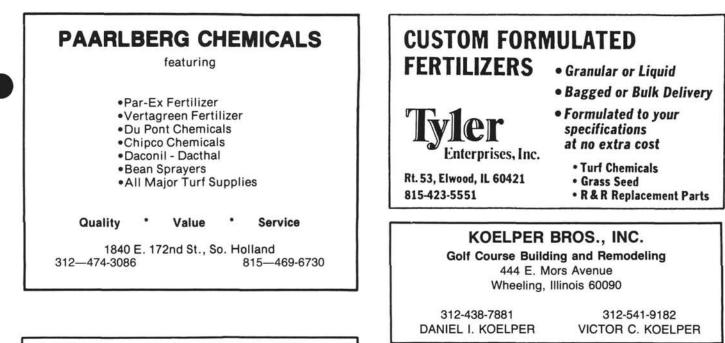
Ray Schei and Steve Stewart



Frank Krueger is waiting for the punch line ...



Overhead view of the NCTE equipment and display floor ...



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bacteria, and the next they may be replaced by an entirely different species. Waterlogging may choke out those which depend on air and favor those which thrive without it. There may be thousands of species lying dormant, waiting for the right conditions. Thus, an activity like plowing can cause the number of organisms to proliferate thirtyfold in a few days.

There is an enormous commerce in chemicals going on in the ground. Microbes and fungi make nutrients available to plants. Some also attack plants and cause them to wilt and die. Some use up essential minerals and thus retard plant growth. Other microbes boost plant growth by liberating more nitrogen or phosphorus or potassium. And there are bacteria which provide plants with growth hormones.

Soil microbes also dispose of sewage and some kinds of trash. In laboratories, we see that the right sequence of bacteria can break down oil. And studies in the field have shown that some soil microbes can consume up to 99 percent of the DDT sprayed on them within a few weeks. But it doesn't always work. Other soil microbes will refuse to "digest" a pesticide as adamently as a child may refuse to eat spinach. And too often toxic chemicals get into groundwater before any bacteria can get to them.

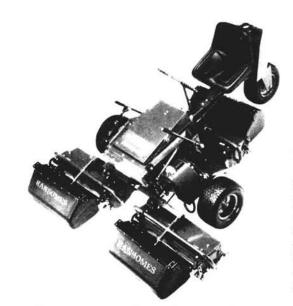
Healthy soil has millions of possibilites: decomposers, benefactors, curatives, tiny chemical factories. But so complex and minute is the life of soil, and so remote are its inhabitants from our eyes, that we do not think of it as a living world. Rather, we think of it as a manufactured commodity. Plow it right, water it right, add a little nitrogen here and a little phosphorus there and, we think, things will grow. Unfortunately, we are finding out that it doesn't always work that way. Much of our technology turns out to be bad for soil. When we take away the vegetative cover by using a plow, we leave the soil open to the forces of wind and rain.

We are now losing topsoil at a rate of about six billion tons a year in the United States, and more worldwide. The causes are varied. Too many farmers plow up and down hillsides, leaving furrows which turn to gullies when it rains. Too many speculators are plowing up dry lands or steep lands that should not be farmed. Too many farmers are abandoning traditional crop rotations that once rebuilt overworked soils. Too many developers are careless with bulldozers.

The consequences of such actions could be enormous in the years ahead. Ours is already a hungry world. If, as the experts believe, one-third of the Earth's cropland is eroding faster than nature can replace the soil, we are losing productivity. We may cultivate the same number of acres, but as the soil gets thinner, we will harvest less food from it. And we will see more streams silting, more fish species vanishing, more sediment filling our lakes.

If we are to turn things around, we are going to have to make some choices. And to make those choices, we will have to understand that soil is not a commodity but a habitat. And we are going to have to conserve it much the way we go about conserving other habitats — by thinking of it as part of the immense and complex variety of life.

> Credit: National Wildlife Feb. Mar. 1985



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Golf Digest Names 1988's Best New Golf Courses

TRUMBULL, CONN. — The Links at Spanish Bay, in Pebble Beach, Calif., Black Diamond Ranch Golf and Country Club in Lecanto, Fla. and Blackwolf Run Golf Course in Kohler, Wis., have been named America's Best New Resort, Private and Public Courses, respectively, by GOLF DIGEST.

The sixth annual selections are announced in the January, 1989 issue.

Courses opened for play between July 1, 1987 and June 30, 1988 were eligible and voted on by a panel of 400 panelists. Seventy-seven courses were evaluated on the basis of five criteria: shot values, playability, design balance, memorability and esthetics.

The Links at Spanish Bay was designed by the team of golf architect Robert Trent Jones Jr., golfer Tom Watson and Frank (Sandy) Tatum, former U. S. Golf Association president. The trio recreated the look, feel and playability of a grand old Scottish Links, using several holes from St. Andrews, Muirfield and other famous U.K. courses as models.

Runners-up in the resort course category were The New Course at Grand Cypress in Orlando, Fla., designed by Jack Nicklaus, and Teton Pines Golf Club in Jackson, Wyo., designed by Arnold Palmer and Ed Seay.

Designer Tom Fazio's Black Diamond course also includes reminders from other great courses, like Pinehurst and Jupiter Hills. But the heart of the course begins on the par-3 13th, where the first of two deep abandoned limestone quarries is encountered. The course then plays more like Pebble Beach, with holes over chasms, along clifftops and down an escarpment. Fazio has now won top honors two straight years. His Wade Hampton course was named Best Private Course in 1987, and his Barton Breek layout was third.

Indianwood Golf and Country Club (New Course) in Lake Orion, Mich., designed by Bob Cupp and Jerry Pate, and Metedeconk National Golf Club in Jackson, N.J., designed by Robert Trent Jones and Roger Rulewich, were runners-up in the private category.

Pete Dye's Blackwolf Run course has a diverse collection of holes that clearly resemble previous Dye designs. Though the course is located in the rolling meadowland and river bottom of eastern Wisconsin, the long, deep bunkers, towering mounds lining some holes and greens half hidden by ominous bunkers are an unmistakable reminder of PGA West. It also features one of the few double green Dye has ever designed.

Second to Blackwolf Run was Page Belcher Golf Course (Stone Creek Course) in Tulsa, Okla., designed by Don Sechrest, while Michaywe Hills Golf Club (Lake Course) in Gaylord, Mich., designed by Jerry Matthews, finished third.

Truth has only to exchange hands a few times to become fiction.

