

ECOLOGY OF A GOLF COURSE

When a golf course is constructed, a new ecology is created out of a natural biosystem, or possibly from the already-altered ecosystem of a farmer's fields. Vital questions arise. What has happened? Is the change for the good or the bad? Can man control this change to his advantage? How does this new circumscribed ecosystem affect the surrounding area? What is this ecosystem of a golf course like in itself?

by Harry Meusel

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The Spreading Megapolis

What if the golf course had not been built? How long would it remain in its natural state? Since the turn of the century, cities and towns have spread and joined tentacles with the rapidity and objectlessness of a cancerous growth, so that in metropolitan areas, pockets of natural woodlands and swamps persist in a precarious present only because they are less economically developed than the more choice land already urbanized. Housing has been by far the hungriest consumer of land. Following the needs of the homeowner come the shopping centers, drive-ins and other commercial enterprises placed on land less desirable for housing. Then towns zone industrial areas to help pay for burgeoning school costs. The prospect that a natural area will be purchased as open space comes as a last choice, for the new homeowner is more concerned with developing

his own little acre with swimming pool and all, than paying for community recreational needs — let alone paying for "useless" open space which might bring in "riff-raff" from other towns, or the city. Thus I feel that the evidence is overwhelming that any site developed as a golf course never had a chance to stay in its natural state anyway.

A Golf Course From Woodland

At any rate, a choice has been made to develop this acreage for a particular purpose. So the question which follows is: what is going to happen to this land? Golf course sites in the Northeast are constructed, in general, from woodland, pastures and wetlands — and very often a combination of all of these. Rather than continue to generalize, I will use the Yale Golf Course as a specific example, for this is the course which I know intimately.

The Yale Course

In 1924, 300 acres of land on the western edge of New Haven were developed into a golf course. This property adjoined roughly 300 acres of experimental woodland belonging to the Yale Forestry School. Most of the acreage was second-growth woodland: beech-hemlock on the northern slopes of the rolling, rocky land and oak-hickory on the southern slopes. What now comprises fairways 2, 4, 5, 6, 15 and 16 was known locally as "The Big Swamp". Here the vegetation consisted of low and high-bush blueberry, pepperidge trees, and occasional birches — black, grey and white. On the edge of the swamp were gigantic tulip trees. The world-famous, 227 yard #9 watercarry was then known as "Greist Pond" — a popular place for ice skating, swimming and fishing. This was actually an early New Haven reservoir created by damming up a natural gully.



Small mammals can still be found in the nearby woodland.



Flowers, such as this Mountain Laurel, flourish on the course.

Wildlife was abundant. In the woodland there were deer, bear (up to 25 years ago), wildcats, foxes, raccoons and small mammals. Both permanent and migrating birds abounded. The pond and swamp were rich in fish and water life. Mink and muskrat flourished along the edges. As already mentioned, the pond provided recreation for human life in the form of fishing, ice skating, swimming and as a water reserve. The area was at the edge of town and yet undeveloped.

From Woodland to Grassland

With the construction of the golf course, the woodland was reduced by 50%, with the resultant loss of some wildlife, especially deer and bear. However, even today the screech of a wildcat is sometimes heard at night. The converted woodland became grassland. Without constant fertilizing and maintenance for specific requirements of grass, this former woodland would begin the surprisingly rapid progression of woody growth within a matter of 3 to 4 years, and eventually return to the original beech-hemlock-oak-hickory climax forest.

Ponds Attract Wildlife

The "Great Swamp" was also converted to grassland. The depression was filled with boulders from the area and with debris left from the construction of fairways. All this was covered with muck from four ponds dredged from the swamp, and with great quantities of soil trucked in. Because of the new ponds, the number and variety of waterfowl increased, for they prefer ponds for swimming and the edge growth for feeding and nesting. The migrating birds may have gained also, because there was now more edge territory where woodland and grassland meet. Few birds choose the deep woods. Field birds, especially swallows, now took up in the new grassy stretches. Rabbits and woodchucks also flourished with the increased grassy areas. The larger animals probably disappeared more as a result of hunting and the development of housing in the surrounding area, than from the reduction of the amount of woodland. In the ponds, a rich variety of life exists - frogs, turtles, fish and the various waterfowl such as geese, ducks, herons and even egrets. Thus, it seems that the construction of the

golf course has improved the chances of many species, especially those associated with water and grasslands; whereas diminishing the habitat of larger animals, which stood little chance of surviving the encroachment of urbanization anyway.

Buffer Zones

The Yale Golf Course has advantages of location that few courses enjoy, for on two sides it has the benefit of additional buffer zones kept in a natural state. To the south are the woods and lakes of the New Haven Water Company, and to the west are the woods of the Yale Forestry School extending to the Merritt Parkway. But, by 1953, the encroachment of housing from the other directions was complete when a developer managed to buy 100 acres of golf course woodland from the University, actually pushing the entrance gate 1/3 of a mile back. Whereas the presence of the golf course makes this area the highest real estate value in the city, it is the golf course which suffers from the proximity to people - vandalism, fires, and rubbish disposed of in wooded areas, to mention only a few of the annoyances.

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Wildlife still abounds on the grounds.



Swamp areas near the 13th green at Yale G.C.

Ecology

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The Course is the "Fall Guy"

Because the golf course is a controlled watershed for the whole area, water problems are always blamed on the golf course since the water originates there. As far as the Water Company is concerned, there is no problem, because water from the course is pure and offers no threat to the Maltby Lake Reservoirs. However, a large housing development built on a former lake bed adjacent to the golf course, suffers from inundated yards and cellars when excessive rains cause the dam on #9 to overflow. Then a howl comes up to the golf course to stop the water. There is little appreciation of the fact that these yards and cellars would be continually under water were it not for the presence and maintenance of the water reservoirs on the golf course. Little consideration is given to the fact that houses should never have been allowed in this natural drainage depression in the first place. Quick-profit developers and short-sighted homebuyers never consider potential water problems — and no one makes them take potential dangers into consideration. Thus, the golf course management must bear the burden of what was once "the will of God".

Scenic Water Hazards

The importance of water on the golf course itself is immeasurable. The aesthetic value of the ponds is immediately striking. From the elevated position of the first tee is a magnificent view of the reflective expanse of #9 pond and the panorama of Connecticut hills to the north. From the clubhouse is the view of the placid serenity of #3 and #4 ponds, where waterfowl stop to rest during migration and geese and ducks raise their young. Ponds at #13 and 17 are each a scenic water hazard. But underlying their scenic contribution is a practical purpose. They provide a recycling irrigation system for the course, which requires great quantities of water to keep the unnatural grass areas green in the hot summer months. Almost all the water used drains back into the ponds eventually, to be re-used.

Controlled Clear Ponds

Fertilizers and sprays are also indispensable to the continued existence of grass areas. DDT is never used on this course, however. The use of fertilizers and sprays is conscientiously controlled, so that no excess is added to drain-off into the water supply. The ponds are clear and no



View through wild-growing Mountain Laurel across water hazard to the distant Connecticut Hills in the background.

visible effects on the purity of the water or on the wealth of the wildlife have been observed. The same geese come back year after year to these nesting grounds. On occasion, however, we do find it is necessary to control algae in the ponds with copper sulphate.

"Real" Water

As well as being a watershed, the golf course area keeps the ground water level high in the area. Although the housing in the area uses city water, it is comforting to know that the ground water is there. Artesian wells provide cool ground water for the thirsty golfers. Two natural springs also draw people with bottles who want the now-too-rare experience of drinking "real" water.

Contribution of Oxygen

The Yale Golf Course is also blessed in that it is near no major source of air pollution. Exhaust fumes from the Merritt Parkway are trapped by a buffer zone of forest. Thus the contribution of oxygen supplied by thousands of trees and millions of grass plants is well on the plus side for this section of the New

Haven Metropolitan area. Also, there is no through traffic on the course and cars are parked 99% of the time they are there. Maintenance vehicles are small and their fumes are more than balanced out by the oxygen generated by the green plants they maintain. The plant life protected and maintained on the golf course also cools the temperatures of the surrounding areas in the hot months.

Open to Nature Lovers

Probably the most weighty criticism that can be held against the golf course is that it is private, and the area is no longer open to the public for recreation as it was 50 years ago. Again I would reply with the argument that the prospects for public recreation here were doomed long ago anyway. Though thousands of "outsiders" have the pleasure of playing golf here each year, and hundreds of Yale people enjoy a picnic grove in the woods, the local residents are still enjoying fringe benefits. Many neighbors enjoy an evening stroll over the course. Sledding and no-lift skiing is available in the winter. (Skating is forbidden for reasons of safety.) Hundreds of peo-

ple drive up to the course during the various seasons to see the laurel, dogwood and the fall foilage. For the experienced nature lover there are such rare plants to be found as lady slipper, trailing arbutus, trillium, pitcher plants, wild azalea and the cardinal flower.

Nature "Made Comfortable"

Long-haired flower children resent being moved off the golf course fairways and greens. "Man, this is nature; Beauty! It's free!" This is *Nature* to the new generation, which has had so little experience with the original. Little do they comprehend the cost and work that goes in to keeping a balanced ecosystem that is convenient and comfortable for man. They feel "free" on the open fairway, not realizing that a truly free ecosystem would have them battling their way through a tangle of woody understory. Here at the golf course all is "natural" — but it is Nature made comfortable and rewarding to man.

Constant Maintenance

Perhaps the revised natural ecology of the golf course is representative of the turn that man has already made in his habitation of the earth. But once he has chosen to revise Nature for his own comfort, he must accept the omnipotent responsibility of maintaining this new balance. And may he always preserve some of the wilderness to learn from.



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