

DEFENDING THE GOLF COURSE: IT'S MORE THAN JUST A GAME

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To most of the 92 percent of our population who are non-golfers, the golf course is a physical symbol of the affluent few who enjoy greater wealth and more leisure time. The golf course represents a playground for the rich and the idle even if it is a public golf course. This false but prevalent negative connotation explains why golf courses have become prime targets for controversy involving pesticide pollution, rising property taxes, and, in some cases, restricted water usage. Further the precedent of discriminating against golf courses has gathered momentum because the value of the golf course as an asset to other members of the community, both golfers and non-golfers, may not have been established. The stock rebuttal to golf course critics has been "that the golf course has improved property values near it" and "grass plants produce lots of oxygen". Neither of these reasons are very convincing to people who are committed to a pollution free environment, more tax dollars, or water conservation. But there indeed is a great number of reasons that can be given to support the existence of a golf course as a protector of the environment and an asset to all people. Then



Golf began on the links of Scotland where man put his skill up against natural hazards for recreation and enjoyment of being outdoors.





APPROACHING "PATRICK'S GREEN."

(From a photo by E. Walsh, 1936)

the point of this article is to examine the value of the golf course in the landscape and provide you, the golfer, with more thoughts with which to defend the golf course.

There are those environmental advocates who say nature can only be protected by the total exclusion of man; and for some special environments, I believe this is a valid approach. However, not to recognize man as part of the environmental equation, or to recognize man as only the exploiter of the environment, demonstrates an unrealistic perception of natural processes. Equally unrealistic are those deeply concerned and committed environmentalists who fail to recognize that all environments are dynamic and changing, and to preserve an environment does not mean freezing it in time and place. In fact, if we separate the term "Environment", meaning a sum expression of physical forces, from the term "nature", which means occurring inherently, then we find that nature herself is a poor "wife" to the environment. Nature is constantly exploiting the environment by permitting overproduction of natural species of both plant and animal life that is held in check only by slow starvation or extreme predation. And nature herself has universally altered the environment with catastrophic powers unequalled by man in the form of glaciers, floods, earthquakes, droughts and, on a smaller scale, lightning.

But since man can not control such natural traumas, we can and should only be concerned with intelligent use of natural resources which includes not only a sensible use rate, but also a sensible protection plan. The urge to protect only occurs when one senses that something has real or intrinsic value and deserves respect. For man to respect nature; he must meet her, sense her beauty, realize her complexities and then resolve to protect her.

Many people approach nature in numerous ways, and to different intensities of experience. For some it is the long trips into remote regions carrying a backpack or paddling a canoe. For others at a less intense level, a short weekend or day trip to a reserved area. For others it is the casual experience of a walk in the woods, a park or a flower garden. Each of these experiences can be effective in allowing man to learn to respect nature.

Golf falls into the latter category of casual experiences; but golf as a recreation, does attract man into nature. It attracts him into regions that he, by his personal nature, may not otherwise be exposed to. Examples of how golf has expose man to nature are many, one such area is remote seashores.

Remote Seashores—Golf started on the links of Scotland and the land was used exactly as it was found. The wind-protected depressions supported growth of fine bentgrasses that were kept mowed short and fertilized by the rabbits and these became the first greens. Fairways followed natural land forms which supported turf growth. Other areas remained hazards. Early town records show golfers may have selfishly been the first conservationists for they argued in town council to protect their course from those who wished to graze herds of sheep that would have completely changed the character of the dunes. Golf was played on natural links land for 500 years until about 1700 when the first inland course was built. The architecture of this first inland course and all that were to follow for the next 200 years were attempts at reproducing the natural links character. However, as the industrial revolution allowed more citizens to play golf, changes in architecture were required to accommodate increased play, but always the attempt was to keep nature.

Even today in seashore settings, man is attempting to protect nature as shown at Amelia Island, Florida.

Golf has moved man into the:

Deserts, where the sheer contrast of man battling to keep a small amount of ground against the ever incessant encroachment of nature provides every visitor with a humbled sense of how strong natural forces are compared to man. It takes only minutes to realize that without constant care and effort, all desert developments would again become deserts. Most men are awed enough by this spectacle that they feel strongly in using the desert resources at sensible rates.

Swamps, which have always been areas feared by men because of the associated dangers of snakes, crocodiles, quicksand, insects, disease and black water. Few men were mentally able to relax enough to view the swamps not as hostile areas, but rather as concentrated pockets of natural processes. Today more people have been moved into swamps by the lure of golf than any other single mechanism. And further golf has moved man into

these areas in a relaxed frame of mind so that he feels safe on the course per se, but is constantly probing the edges to experience the swamp environment. To reiterate this casual experience will in no way teach golfers about swamp ecology, but it may move him to support efforts to preserve wetlands designated by experts. For my opening premise was that for man to respect nature; He must meet Her, sense Her beauty, realize Her complexities and then resolve to protect Her.

Mountainous regions, where golf is far removed from its birth-place along the sea, but nonetheless, golf is at home in the mountains and is in harmony with its surroundings. Mountain valleys converted for golf places an economic value on mountain land that causes responsible people to use it at a sensible rate and hopefully in a sensible way.

Golf has adapted itself well to wasteground or land currently unusable for other purposes.

But not all golf is confined to scenic or valuable land. Golf has adapted itself well to waste ground or land currently unusable for other purposes.

Floodplains have always been avoided for development not only because of the potential for total flood damage to crops and buildings, but also because of damage of erosion or silt deposition. Golf courses, if properly planned, can not only withstand the flood threat and reduce erosion but also they convert wasteground to a valuable recreational property or a community asset.

Landfills and their resulting ground water and visual pollution. Such areas, when converted to golf course use, not only reduce the visual objections but also cause money to be invested in ground water control. A converted landfill or strip-mine also provides more tax revenue for municipal works and schools.

Golf has made use of land otherwise restricted for another use such as landing approaches to airports and utility right of ways. Placement of golf courses in these areas not only improves the aesthetics of such land, but also removes a need for clearing cutting or the use of defoliant sprays.

Preservation of large tracts of historically significant land can be costly, and when the interested group of preservationists is small, there may not be enough money or political impact to save a site from a developer. Many times a golf course can be built on the historical site with little disruption to the special feature of the site and thus allow some site preservation. A classic example is the Mound Builders golf course in Neward, Ohio, built in and around the great Octogan Earthworks. Some purist may feel that the symbiotic use of this ground is more of a sacrilege than a salvation. But one need only look at the rest of the mound complex not oc-

cupied by the golf course and see that virtually all vestiges of the earthworks have lost to housing.

To summarize to this point it should be evident that golf does move man into nature and allows him to casually experience various habitats. However, the best part of it is that man pays to do it. Golf is unique in that it can produce thousands of dollars of annual revenue that can be used to produce or improve other natural or recreational areas. Many government agencies that operate golf courses use the profit from golf to provide free tennis courts, ball fields, trails, parking lots and other non-revenue producing recreational facilities. Further, golf doesn't obliterate nature like some forms of recreational developments, rather, it only causes a shift in the ecosystem that favors other types of organisms and populations.

Studies have shown golf courses to have improved populations of rabbits, fox, raccoons, skunks, opossums, deer, small birds, and numerous lower animals. In fact the Audubon Society produced a book many years ago called Golf Clubs as Bird Sanctuaries, that went into great detail about aviary populations on or near golf courses. By constructing ponds as hazards, water storage areas, and aesthetic installations, man has reduced erosion, improved plant growth conditions by better drainage, improved aquatic populations of everything from beavers to frogs and fish and to great blue herons and ducks, and has attracted man out into nature.

Many times the alteration to the ecosystem caused by a golf course development has other benefits as well:

- 1) Actively growing turfgrass acts as an air filter and can produce oxygen at the rate - 1 A/day = enough O₂ for 1742 people/day.
- 2) Tightly grown grass swards eliminate erosion.
- 3) Large grass areas have a cooling effect on surroundings.
- 4) Noise pollution is reduced.
- 5) Property value is improved.
- 6) Serves as a receptor of human wastes for many golf courses use sewage sludge fertilizers, compost, and unpotable water sources.

The American Society of Golf Course Architects in conjunction with the U.S.G.A. through its' research foundation has contracted the University of Florida to study the use of sewage effluent for golf course watering.

Golf courses have year round alternative uses other than golf. Constructed ponds in the summer may provide fishing, bird and waterfowl study areas, small boating, swimming or scuba diving. In the winter these ponds become skating or hockey rinks. The golf cart paths make excellent jogging or walking trails and bicycle paths in both winter and summer. The fairways and rough areas make good areas for crosscountry skiing or sledding with a minimum of snow cover. Perhaps the greatest alternative use for a golf course occurs on soft, warm, nights by couples - both young and old.

Speaking of young and old brings to mind the fact that golf is a game for all ages, all physical abilities and all income levels. In very few physical sports is

there more social mixing of people in a fair competition. Although strength is important, timing and coordination are more so, for golf is a game of skill. By handicapping, a fair competition could be arranged between a young strong golfer and his grandmother. When public golf is offered at prices comparable to movie house admissions, and used equipment can be bought for the price of baseball gloves or a bowling ball; golf is within reach of all income levels.

At this point I trust that I have clearly established the value of a golf course as an asset to the community for all people. I have eluded to the fact that golf courses, in some instances, are outright protectors of the environment, but there are those who would respond that the very act of building and maintaining a golf course is destructive. This point of view is not totally supported by those who have carefully observed and monitored such activities. Let us look at some of the more often heard comments about each construction step.

Clearing - There has been heard on occasion the comment "that the golf course will totally destroy the woodland". Admittedly, during the actual clearing operation it seems as if the entire woods is being ruined since about 50 percent of all trees must come down. However, it must be remembered that the goal of good golf course design is a natural appearance and most golf course designers are environmentally aware. As a result those trees that must be removed are carefully selected and marked so that the best trees remain. Many, many golf holes have been altered to save a specimen tree or stand of trees.

When public golf prices are comparable to movie tickets and used equipment can be bought for the price of a bowling ball, then golf will be within reach of all income levels.

The areas outside of the fairways are selectively thinned to allow sufficient light and air movement to permit good grass growth. This thinning operation in combination with the fertilization given in these shaded areas results in a stronger, more vigorous tree. This tree is growing in an environment of better nutrient, light and water balance with a reduced possibility of disease or insect infestation. Golf fairways wandering through a wooded area have also been praised by foresters as irrigated firebreaks.

During the **earth moving phases** of golf course construction, references have been made toward "wholesale erosion" of topsoil. But this is not likely for all topsoil is stripped and stored in areas of

grade change and replaced to encourage good turf growth. Since erosion can cost the contractor thousands of dollars in repair and replacement every means of prevention is used. These include confining earthmoving on erosive slopes to a minimum, seeding to a cover crop as soon as practical and straw mulching all disturbed areas. Although some soil may erode and temporarily pollute some streams, the loss is small when one averages it over the life of the golf course.

Although in most parts of the country golf courses are constructed by cutting and filling of land above the ground water table sometimes the construction of a golf course alters wetlands by draining or filling. However, such alterations may not be without benefit. The usual procedure in golf course construction is to dig a lake and use the fill from this operation to raise the surrounding land. This area of filled land usually does not extend more than 100 yds. wide. This narrow distance does not significantly alter animal corridors and actually benefits most species. Development of a deep lake instead of shallow swamp permits a wide variation in aquatic life ranging from more diving ducks to species of fish. Surrounding land is better drained and water storage for fire protection or animal preservation against drought is improved. Again, any designer worth his salt would seek to harmonize the golf course into the wetland environment by leaving many large untouched areas and not try to change the character of the wetland.

Stream channelization can dramatically and adversely affect a delicate environment. However, if no such unique or delicate habitats exists, stream channelization when properly done has many beneficial effects.

- 1) Straightening out a meandering stream may allow better use efficiency with minimum construction, best land utilization, and least development costs.
- 2) Allows more efficient stream bank maintenance and better access.
- 3) Increased flow may increase oxygen content of water thus combating purification.

I feel certain that there are other objections to golf course construction but in all instances I know of, the benefits of properly building the course outweigh the detrimental effects.

Objections to **golf courses' maintenance practices** usually center on the use of fertilizers and pesticides. Most of the early discussion was based on intuitive calculations about pollution and contamination resulting from surface and sub-surface runoff. When such allegations were first made, there was no basis in fact to counter them, simply because no one thought of it before and no one really cared. However, in the last five years, extensive research has shown no significant runoff of chemicals of any kind if properly applied. This phrase "properly applied" is not a cop-out for only a very small fraction of a percentage is not properly applied. The golf course superintendent of today is usually college trained in a program that is geared to pesticide safety. He is, in most cases, licensed as a commercial applicator, and to

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become certified requires more examinations on such subjects. Lastly, a pesticide mistake results in phytotoxic condition that is embarrassingly evident to everyone including his employers. As a group, the golf course superintendents may be the most experienced and qualified pesticide applicators and hence the safest users of pesticides. This does not mean however, that we should not be concerned about the total volume of pesticide use and all possible side effects. Thus the American Society of Golf Course Architects committee on environmental impact, chaired by an ex-bacteriologist, is preparing a white paper on the subject of golf course impact and will continue to monitor the literature to keep current and present these findings.

In summary, it is not difficult to use loaded words to evoke loaded thoughts about any site or golf course development project. But when each objection is examined in calm reflection, the benefits of the golf course in the landscape far outweigh the detrimental effects.

Having presented all of these facts and observations, it should be clear to even the non-golfer, that golf course development should be encouraged and not simply tolerated. If we introduce the general public to the many positive aspects that golf courses can bring to a community, it would seem logical for them to support any legislation that would permit golf courses to be taxed as open recreational ground and not at their highest and best use. The greatest threat to proposed and ex-

isting golf courses today is property taxes, that may be in excess of \$100,000/year in some areas. Many clubs simply cannot continue to pay such high rates and are selling their land to developers. In some cities, this problem is so acute that there has been an ordinance passed that says no golf course can be sold for any other purpose but golf until a new golf course of similar size opens. Although there is no pending legislation, we should begin now to encourage others to support fair taxing of golf courses for they are protectors of natural resources.

With the recent passage of Proposition 13 in California thereby reducing private property taxes, it is only natural that increased taxes will be expected from those still available tax sources. To many, the country clubs symbolize the elite and the rich and so little general sympathy will be shown if increased tariffs are levied on the country clubs. Unless some exemptions are made for these clubs, it could spell the end to many.

Having read this article you now have an arsenal of benefits provided by golf courses that should be used to defend their existence. Better yet would be to take the offensive and see if a committee or program of community relations could be set up to more clearly demonstrate the importance of the golf course to its' neighbors. It could be anything from designated wildlife areas or bird houses to a collection of used golf equipment donated to the schools or park systems. The possibilities are endless and successful programs will be noted in golfing publications like this.

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get to them easier," Hawthorne says. "A bucket operator can swing away from a tree and at it from a 40-foot height and 30 or 40 feet away."

"We can get a better perspective than a climber because a bucket truck can be put right against a trunk or the operator can even climb out of it and up the tree if he wants. Often we'll use a bucket truck to take a guy up to the first branch of a tall tree. With 120-foot tulip poplars where the first limb may be 60 feet off the ground, we can get a climber in the tree much easier than trying to throw up ropes and set up ladders."

Although not a frequent job, cavity filling in high sections of trees is something Hawthorne's crew must sometimes do. "Instead of a man sitting in the saddle to dig the cavity out, he can stand in a bucket truck and work. Excavating a cavity can take two or three hours which can be very tiring in a saddle. Depending on the size of a cavity, you may have to make a couple trips up a tree carrying cement, chisels, and other tools."

This seems to sum up much of what Hawthorne thinks is the main advantage of bucket trucks. They are a practical mechanical device which supplement man's abilities. He says, "I would not say a man could trim a tree faster in a bucket truck, but he's not going to get as tired. A bucket truck

operator could do more trees without being so winded."

A bucket truck is not for every tree. Hawthorne estimates he can probably get to 35 percent of his trees, but as far as all work goes—takedowns, shaping, pruning, and even spraying—he can use it on 75 percent of the trees in his area. He's received some contracts in towns with a good number of trees that would be too time consuming and costly to do without a lift. A smaller operation with a truck could expand and do many more jobs, he thinks.

Some of the unique jobs he's received because of the bucket lift include decorating Christmas trees, lifting solar panels onto roofs, changing lights in parking lots, raising advertising signs, elevating movie cameras and cameramen to photograph certain scenes, and spraying large areas.

Results are good, business gets better, and Hawthorne finds more things for his bucket truck to do every day. Nobody has compared Hawthorne's trees to Halsted's. One is in the east, one in the west; one uses bucket lifts, one almost exclusively climbs. Both men think they are doing the proper job as arborists. They realize that without the skill, knowledge, and practice, their work and talk would be meaningless.

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