

A Golfing Oasis

WTT COVER STORY

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*To be successful, both
plant and man must work
at survival*

*The desert bloom is an
ordered period of beauty
operating according to
Nature's own special plan*

COMPREHENSION of time in terms of billions of years is beyond the mental grasp of man. Yet, it is this kind of time that was necessary to form and shape such unusual areas as Death Valley, California, on the eastern border of the state not far from Las Vegas. Visible evidence indicates that the processes of Nature continue today.

We stood recently on the rugged peak overlooking that portion of the valley below known as the Devil's Golf Course. From this vantage point, properly named Dante's View, is the most ancient of all the rock formations that belong to the Pre-Cambrian Era of geologic time. This

their way to the California gold fields, Death Valley, as they named it, is not without a wide range of plant and animal life. Even as late as 1922, reporters who were covering the famous character, Death Valley Scotty, referred to the 'Valley' as destitute of all vegetation.

Following the takeover of this unusual piece of geography by the National Park Service, creating present day Death Valley National Monument in 1933, botanists have recorded over six hundred species of plant life within the 3,000 square mile park boundary. This is in itself a most interesting story of plant survival in a rugged land.



Furnace Creek Ranch Golf Course is a nine-hole course designed by William P. Bell. Twenty-five tons of annual ryegrass are used each fall to provide "green grass" for winter play.

proved to be truly an awesome view, one very similar to those vista shots sent back to earth by our most recent Moon explorers. Like another famous geology area, Grand Canyon, Death Valley National Monument is represented by all of the geology Eras of the time scale of creation.

Plant Life

Contrary to the opinion of the lost party of 49'ers, who happened into this barren land by mistake while on

The influence of elevation in this region is significant indeed, and accounts for the many extremes in temperature, moisture and variety of plant life found here. For instance, for each two hundred foot rise in elevation, an additional one inch of precipitation annually becomes available and a drop in temperature of one degree. With the lowest elevation of 282 feet below sea level and Telescope Peak towering directly opposite, standing at 11,049 feet

Below Sea Level

above sea level, it is understandable that a total range of plant life is possible.

Only the central salt flats near Badwater are totally barren of all plant life. On the outer edges of these salt flats, where the salinity runs six percent, Salt Grass and Pepperweed are able to survive. In total contrast, in the 8,000 to 11,000 foot climatic zone, Bristlecone Pine are found growing that were mere seedlings when Solomon was building the Temple in Jerusalem. At this elevation it is not unusual to encounter 20 foot snow drifts that close the few entry roads from the west which originated as winter storms

tailored world of leisure.

In the harsh environment here on the valley floor, the practical holds equal importance to the aesthetic. For instance, in the spring of '72, the strong winds that blow up the valley from down Mexico way almost covered the 13th fairway with drifting sand. Had not the southern border of the fairway been planted with a tight row of Tamarix, a far greater encroachment of the golf course fairways by the drifting sand would have been experienced.

The Date Palms have a similar application. They provide a sense of dignity to surroundings that depict harshness, reminding one of the un-

where is the discipline of Nature more controlled than here in the desert. For here the balance of growth inhibitors and growth stimulators come into play.

Moisture and temperature at the time of germination of the 111 known species of annual flowers is the key factor. Those of us who deal with grass seedlings surely recognize the marvel and complexity of the seed. The role of the growth enzymes are truly fascinating. In the desert environment, they are in complete control.

Too little rain and the inhibitors are not leached out; the temperatures too cool and the stimulating enzymes are not triggered. However when Nature deems that everything is "right," the desert seeds that may have been waiting for a number of years germinate and come into bloom.

We noted such a vast germination during November while experiencing unusual amounts of rainfall. Indeed, Nature seemed tuned-in and heading for a record spring bloom. To return again in spring to witness the beauty in this rugged setting would be delightful indeed.

The Devil's Golf Course

My interest in a visit to Death Valley was three-fold: the geological wonder of it all; the photographic challenge that I knew existed, and the intriguing story, as told by a friend, that an 18 hole golf course existed here at 215 feet below sea level, growing real live grass on an ancient sea bed so saline at some points that grass cannot survive.

The other, an imaginary 'golf course' is affectionally known as The Devil's Golf Course and is so indicated on all of the official Death Valley National Monument maps.

No grass grows here.

The location is at Badwater, 282 feet below sea level; truly a briny no man's land, a total desolation for nothing grows.

The salt crystals that thrust up and crack open are responsible for the geological misnomer, thus the name of Devil's Golf Course; and all rough, totally impossible for plant growth and shot making.

This has only one similarity to the real golf course at Furnace Creek Ranch; both are located on ancient sea beds, but this one is spread over an area of 200 square miles where surface temperatures soar to 190 degrees, leaving it the most lifeless of any known location on our planet.

At Furnace Creek Ranch Golf
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Would you believe that this course is located 279 feet below sea level? Note the Tamarix and Date palm lining the fairways. Annual ryegrass is used all the way because of its survival characteristics.

over the Pacific.

Of the 600 species of plant life, 30 are of the grass family. Some of the tree forms like the Tamarisk and Date Palms used at the Furnace Creek Golf Course are naturalized-adapted for special purposes. Their use at the golf course and at the Inn are both psychological and practical. The waving of the tree tops during the warmer portion of the tourist season provides a sensation of cooling, a fringe benefit to man in his

usual setting in which he seeks his recreation. The practical issue here is use of the dates by the baker at the Inn in putting his secret date-bread formula together for an eager clientele who patronize both the Inn and Furnace Creek Ranch, operated by the Fred Harvey organization.

The Desert Life

The desert bloom is an ordered period of beauty, operating according to Nature's own special plan. No-



With the advent of hot, spring winds, Bermudagrass comes alive for April and early May play. There is no summer play because temperatures daily climb up to 134 degrees.

GOLFING OASIS

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Course there are many challenges. One would expect this. Opened for play in the late twenties as a nine hole links, it was expanded to eighteen in 1967 by William P. Bell, well known west coast golf architect.

Manual fairway irrigation replaced the former flooding type of water application. Bell carefully selected tree forms that would provide a green oasis atmosphere in this desert environment. Although playing only 5800 yards, the country mile shot does not come so easy as on conventional layouts—below sea level at-

mosphere, you know.

The Environment

What kind of grass grows where the temperature of 134 degrees last summer equaled the all time high established in 1913; where the humidity at the same time was at zero, and the ground temperature one inch below soil level was 209 degrees?

Bermuda is the answer for this location in the hot months which cover the greater span of the calendar.

Naturally no one plays golf during the peak of summer. Man seeks his recreation here only during the season known as winter outside the valley, the period of November 1st through May 1st, truly a delightful time in the valley.

For early fall and spring growth, 25 tons of annual ryegrass are sown. This converts the playing areas of tees, greens and fairways to a pleasing facility that is indeed inviting to the patrons. By late April as the warm winds blow up from the open desert areas of the south, the Bermuda makes a comeback and continues through the remainder of the year.

Problems

Paul Woitke, a GCSAA Scholarship winner at Penn State Turf School last March wanted a western location for his first position as golf course superintendent. He elected to try his hand in this hell hole on the

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This is Devil's Golf Course. Looking much like the pictures taken on the moon, this area represents part of the most ancient of all the rock formations of the Pre-Cambrian Era.



This view of Death Valley is only a short distance from Furnace Creek Ranch Golf Course. Note the saltbushes whose roots radiate 30 feet to gather sufficient moisture.

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GOLFING OASIS

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face of this planet.

To be successful, both plant and man must work at survival.

Above all, both must be adaptable.

The desert is unbending. "Once we sow the ryegrass, it would seem that the migrating birds appear from everywhere by the many thousands." This is understandable because this is the only oasis within hundreds of miles.

Many of the birds, like the paying patrons, elect to remain all winter. With a fresh water reservoir that is continually replenished from springs located in the mountain canyons 16 miles away, the birds, especially the coots, do remain and become a continuing problem by constantly drilling holes in the putting surface looking for insect food or sprouting seed.

"We have many other problems", Paul reports. "Coyotes often dig holes around the cups out of sheer curiosity in attempting to find out what is in the hole. The riding stable horses tear down the paddock to reach the green grass that they can smell." Occasionally rattle snakes crawl in from the desert seeking relief from the heat.

"Just don't put your hand into any high grass areas, it could get you in trouble," he says. How much water is necessary seemed a logical question. "Too much water is lost in mid-air if we irrigate during the daylight hours, Paul notes. With only the golf course demands to meet it is just possible to get through the heat of the summer. The Bermuda is allowed to grow long and often cattle are brought in to graze until October 1st. Then the preparation for the winter season begins.

"We can supply 1200 gallons per minute to our sprinkler heads," he says. "During the 'season' we are careful to use only a 30-1-0 fertilizer for growth stimulation and avoid any addition to the salinity content of the soil, irrigating only for immediate use."

Curious as to whether the famous weed-grass, *Poa Annua*, could be found surviving in this high temperature environment, we searched in the longer grass near the compost heap and, sure enough, there it was about ready to bloom.

I suppose a specimen plant should be forwarded to the Park Naturalist just to make sure it was not left out of the total count of the 600 plant species recorded. Perhaps they don't know of its existence. Ask almost any golf course superintendent! □



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