

## Springtime Thoughts About the Weather and Some Other Things

By Monroe S. Miller

I can almost hear the groans now as a lot of you say, "Please, not another word about the drought of 1988. I don't think I can stand it." But there are some things that have happened since last summer that belong in the final chapter before we close the back cover of the book about the drought, hopefully for good.

As a way of confirmation of our misery, John A. Dracup, a civil engineer at UCLA, says that the drought of 1988 was the nation's worst natural disaster on record. It caused an estimated \$30 billion in agricultural losses and its related heat wave contributed to 10,000 deaths.

As a point of reference, the hurricane that struck Galveston, Texas on September 8, 1900 and killed 6,000 people was the second worst natural disaster in America's history.

Experts gathering at the annual meeting of the American Association for the Advancement of Science sought to assess the drought effects and costs. I think that their organization adds a lot of credibility to the estimates. Despite the fact that the 1988 drought was slightly less severe in area and intensity than the droughts of 1932-1936 and 1953-1956, 70 percent of the nation experienced "extensively warm and dry conditions."

Summer high temperatures set records for **any** date in 13 percent of the country. The heat and resulting stress contributed to the estimated 10,000 deaths noted above.

Scientists believe the most long-lasting effects will be losses to our environment. For example, populations of certain species of wildlife in the Mississippi River basin were reduced by five to 30 percent. The damage from forest fires was the greatest on record. Falling water levels on the Mississippi River brought a stop to barge traffic in June and July.

On the one hand, researchers agreed it was impossible to say whether the drought was evidence that global warming (known as the greenhouse effect) was beginning to take

hold. But they did agree that the drought of 1988 is **not** over and that a large portion of the country, including Wisconsin, remains vulnerable. If we have a dry spring, we could have an extremely serious situation on our hands.

Just what we don't need on our golf courses.



It's a relief to read that the AAAS scientists don't necessarily think the greenhouse effect is on our doorstep. Some other of our country's researchers are confident enough to declare, unequivocally, that the greenhouse effect **wasn't** the culprit in the unusual weather of 1988, either the drought in our corner of the world or the record rainfall and floods in Bangladesh.

Scientists in general and climatologists more specifically believe that massive, naturally occurring climatic forces in the tropical Pacific were the culprits. Those forces involved ocean temperatures and atmospheric winds. They now believe these forces are intricately interconnected. Some are coming to the belief that conditions in the equatorial Pacific are the planet's most important source of short-term climatic changes. According to the theory, which wasn't even realized or developed three years ago, the drought of 1988 began when unusually cold water in the Pacific near the equator pushed an "intertropical convergence zone" (an area where trade winds collide) farther north than usual. The zone overlapped abnormally warm water southeast to Hawaii. Scientists cannot explain this patch of warm water, but the result of the clash of it with cold water caused an unusual amount of thunderstorm activity in an area where it usually doesn't occur. These storms disturbed the atmosphere, setting up ripples and swirls that became high and low pressure systems. These systems pushed the jet stream far to the north. The movement of the jet stream more northerly than usual made way for a large, rainless high pressure sys-

tem which brought on our drought.

Rain that normally fell on areas like Wisconsin was shunted along the jet stream into Canada. Once the drought began, it fed on itself as evaporation at the Earth's surface decreased and surface temperatures increased. Even if a cloud wanted to form, there wasn't enough moisture to produce rain.

Those investigators are **not** dismissing the greenhouse effect. They recognize that there may be warming of the earth caused by the pollutants we are pumping into the atmosphere and know it could have a major effect on our weather in decades ahead. They simply believe this newly developed theory and attending information more clearly describe the 1988 disaster.

See the January issue of *Science* magazine for more reading. Heaven knows it affects all our lives.



Since we are always looking for signs of what is to come, what does the warm January of 1989 signal for us?

As every golf course superintendent probably knows, Wisconsin had its warmest January since 1944. The average temperature, according to state climatologist Douglas Clark, ended up about 27 degrees above zero. That's around 12 degrees above average and about the same as we had 45 years ago.

The warmest January in Wisconsin was in 1933 when the temperatures averaged 30.8 degrees.

We should be grateful for one thing: "Temperatures this warm January were very unusual, but they **DO NOT** predict much," Clark said. He added that atmospheric patterns seem to shift pretty abruptly so the fact that you have a warm January doesn't really tell you anything about February (or July). In 1933, for example, February was above average.

Most of us join the farmers in expressing some gratitude for the warm January winter weather; it helped remove a lot of the ice on alfalfa fields

and golf courses all about the state. Early in the month we were all worried about crop and grass losses. Now that concern has primarily focused on the low-lying areas.

Having said that January's weather is not an indicator of the upcoming season's weather, I may as well share what the UW-Madison's Center for Climatic Research predicts. Sit down, please. Take the handkerchief from your pocket and get ready to dab the tears from your eyes.

Wisconsin has had a dry spell dating back to 1986 and, as you are well aware of, it really intensified last summer. The University of Wisconsin forecasters say it is likely to continue this year. They feel it isn't out of the question to say we're still in a dry phase. The real question is when it will end.

University of Wisconsin researchers Reid Bryson and Ed Hopkins have prepared a ten-year forecast of monthly precipitation for the region around Lake Michigan, which includes our Badger State (or at least most of it). There is credibility in their outlook — they were "in the right direction" 60 percent to 80 percent of the time over a large number of forecasts.

The center forecast calls for plenty of moisture through the winter and spring, but a drying out near the end of the 1989 growing season. Dry conditions for the lower two-thirds of Wisconsin during July and August are forecast. The northern areas are predicted to have near or above normal precipitation for the growing months.

Read this closely: a look toward 1990 sees the dry spell continuing. The only time Wisconsin has had consecutive drought years was in 1863 and 1864. Our driest growing season on record, which I'll testify to, was in the bicentennial year of 1976.

Since November of 1986, below normal precipitation has been recorded in 19 of 27 months.

One more note about the drought — please. This comes under the "How dry was it?" department. The winner of the Burlington Liar's Club WORLD CHAMPION LIAR title told a fib about the hot and dry weather that plagued us last year. Roy Griesbach from Appleton won the award with this whopper: "The weather was so dry this past summer that the only water one could buy was dehydrated in 16-ounce packages."

Some Wisconsin golf course superintendents might not see the humor in that winning entry — it's too close to the truth.

Last year I wrote a "Jottings" piece about the American chestnut in general and about the two juvenile chestnuts I have growing at Blackhawk Country Club. In that story I told you a little bit about the VPI chestnut orchard and how much I'd like to visit it someday.

Since then I've come into possession of a tremendously exciting bit of information. It comes from Hoyer Coulee, near La Crosse.

About a hundred years ago, a Wisconsin farmer named Martin Hicks planted nine seedling American chestnuts (*Castanea Dentata*). Although they're not native to our part of the country, they grow well here. The seedlings planted by Mr. Hicks prospered and were beyond the reach of the fungi that eventually killed all of the trees growing in the East.

The chestnuts grew, matured and reproduced. Today there are 5,000 chestnuts of various sizes growing on the ridge at Hoyer Coulee. I'll never know why I have not heard or read about them.

As exciting as it seems, it was a pending disaster that brought the Hicks chestnut stand to my attention. The dreaded blight has reached the La Crosse chestnut woods. The end result is assured.

The president of the American Chestnut Foundation, Phillip Rutter from Canton, Minnesota, says that the Hoyer Coulee is "the chestnut's last stand — you're looking at a resource with a limited lifespan. When the blight finishes its work here, this will be just like the Appalachians in the 1930s. These chestnuts will be dead."

The disease has given a new sense of urgency to scientists studying the chestnut tree. Since it is the finest naturally producing stand of American chestnuts anywhere, they had hoped to use it to help develop a blight-resistant tree which would restore the chestnut to its rightful place in American forests. Wisconsin forestry officials are trying their best to control the infection, but there seems little chance the stand will avoid the grim fate of nearly all the chestnuts before them.

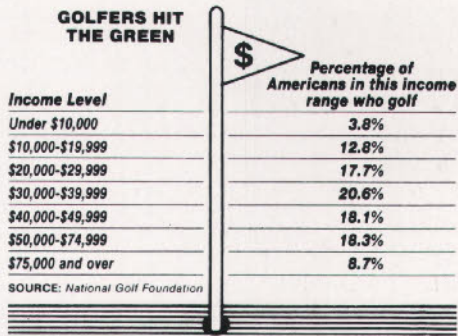
A lot of the work of the American Chestnut Foundation involves the genetic "backcrossing" of the American

chestnut with the blight-resistant Chinese chestnut. What they hope for is a strain of *Castanea* nearly like the American but with the resistance of the Chinese species.

I am praying for their success, and who knows. Maybe it will come about.

I do know that I am going to make a trip to La Crosse in early summer to try to find this wonderful collection of chestnuts, on the ridge near Hoyer Coulee.

Is golf the game of rich people? I guess the answer to this ancient and often-asked question lies in your definition of the word "rich." Here are some statistics from the National Golf Foundation that will help answer the question, regardless of your definition:



I have always thought of Carl Sandburg as the Midwest's version of Robert Frost, despite the fact he was born near Asheville, N.C. Not only do their subjects and words have some similarities, but they even sort of looked a little bit alike. Anyway, for your springtime reading pleasure, here is a short verse by Lincoln's most famous biographer. It is titled "Spring Grass":

*Spring grass, there is a dance to be  
danced for you.  
Come up, spring grass, if only for  
young feet.  
Come up, spring grass, young feet  
ask you.*

*Smell of the young spring grass,  
You're a mascot riding on the wind  
horses.  
You come to my nose and spiffed  
me. This is your lucky year.*

*Young spring grass just after the  
winter,  
Shoots of the big green whisper of  
the year,  
Come up, if only for young feet.  
Come up, young feet ask you.*