



# What the Heck is Brown Ring Patch?

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You may have heard about a new disease of *Poa annua* and creeping bentgrass called brown ring patch. Yes, the actual name of the disease is brown ring patch. Not the greatest of disease names, but in the world of fungal taxonomy and disease connotation we have to stick with the name given by the first publication documenting the disease. I do not like the name either and I have heard a number of comments about the name, for which you can use your imagination. The fact of the matter is this a real problem for turfgrass managers and we know very little about this disease.

Brown ring patch was first described as a disease of creeping bentgrass in the late 90's by Japanese researchers. They implicated the *Rhizoctonia*-like fungus *Waitea circinata* var. *circinata* as the causal agent. The symptoms are very similar to those of another turf disease, yellow patch, caused by *Rhizoctonia cerealis*. Symptoms of brown ring patch initially appear as thin yellow rings, several inches to several feet in diameter (Figure 1). Rings have a circular or scalloped appearance and may stay yellow, however the rings can become brown and necrotic over time (Figure 2).

Dr. Frank Wong at the University of California-Riverside also observed these symptoms on annual bluegrass putting greens. From his work, we know that the pathogen appears to colonize the crowns and stolons of creeping bentgrass and annual bluegrass (Figure 3). In addition, the pathogen appears to degrade the thatch layer, which can cause a sunken appearance to the stand symptoms mentioned above (Figure 4).

Symptoms of brown ring patch have been observed over a wide range of air temperatures, anywhere from 59°F to 95°F. Dr. Randy Kane and Dr. Derek Settle with the Chicago District Golf Association have done some research with brown ring patch and they see symptoms develop in May and June. Researchers at the CDGA observe that the symptoms lessen greatly during the heat of the summer. Paul Koch and I have also tentatively diagnosed brown ring patch in Wisconsin and Minnesota during May and June. This is starkly different from what Dr. Wong observes in California. Brown ring patch tends to be more problematic when temperatures are above 83°F and the symptoms appear to get worse as temperatures increase.

There is an interesting side story with this disease. Someone asked me at field day, is brown ring patch problematic or going to be problematic in the



Figure 1. Brown ring patch of annual bluegrass in California. Note the yellow, scalloped rings.



Figure 2. Brown ring patch symptoms. Color has started to change from bright yellow to brown.



Figure 3. Brown ring patch pathogen colonizes crown and stolons of creeping bentgrass and annual bluegrass.





**Figure 4.** The brown ring patch pathogen appears to colonize the thatch layer and degrades it. As a result the patches can have a sunken appearance. See area on left side of plug compared to right side of plug.

Midwest? Well, Dr. Randy Kane observed the yellow, scalloped shaped rings in the late 1980's. He isolated a *Rhizoctonia*-like fungus from the diseased tissue and sent the isolates off for identification. The isolates were identified as *Rhizoctonia zeae*, a pathogen that induces brown patch and leaf blight in tall fescue under extremely hot and humid conditions in the Southeastern United States. However, the tools available for identification of *Rhizoctonia* species were not as well defined as they are today. *Rhizoctonia zeae* and the brown ring patch pathogen have very similar morphological characteristics and can be easily confused. What Dr. Kane observed 15 to 20 years ago could have been a different disease, however it is likely that brown ring patch has been around for a while.

If you start seeing symptoms that resemble brown ring patch what can you do about it? Well, research from the CDGA has shown that Prostar at 2.2 oz or at 4.4 oz works well for curative applications. They also documented good efficacy from curative applications of Heritage (0.4 oz), Banner Maxx (2 fl oz), and Triton FLO (0.55 fl oz). Dr. Wong in California, found Headway and Endore suppressed symptoms quickly following a curative application and maintained suppression for 21 days. Although, Trinity, Triton, and Prostar took two weeks to suppress symptoms in Dr. Wong's trials, these products provided the longest lasting control; up to 21 days for the two DMI's and 28 days for Prostar. Dr. Wong's recommendations are to tank mix any of the following products Heritage, Endorse, Medallion, Insignia, or Prostar with Banner Maxx, Triton, Tournay, or Trinity in order to obtain superior effectiveness. It is also recommended that fungicide applications should be watered in. An application of nitrogen aids in masking the symptoms as well.

I know you may find the previous paragraph confusing and there is a good reason for this. I mentioned that we know very little about the epidemiology of this

disease, consequently our recommendations can be muddled. These fine researchers are conducting "blind" fungicide research in order to provide turfgrass managers with an adequate solution until more of the biology and epidemiology of this disease can be studied. Fate would have it that the expert on this disease, Dr. Frank Wong, will be in our part of the U.S. for an extended period of time. Since he will be in the area, we are going to work together on the epidemiology of brown ring patch. I am very excited about this opportunity and I think Dr. Wong is too. So if you see me or Paul accompanied by Dr. Frank Wong do not be surprised. ♻

## Welcome the following New Members to WGCSA!

**Brad Carson**, E, Bioverse Inc.  
Pipestone, MN

**Brian Johnson**, S, Penn State University  
University Park, PA

**Jeffrey T Howe**, A, Sycamore Creek Golf Club  
Osage Beach, MO

**Gary Peters**, E, Peters Consulting Services  
Williams Bay, WI

**Franklin A Unran**, SM, Geneva National  
Trevino Course, Lake Geneva, WI

**Kasey VandeBerg**, SM, Scenic View Country Club  
Slinger, WI

**Kristopher J Woppert**, SM  
Geneva National Palmer Course, Lake Geneva, WI

## Coming Events

**November 18 - WGCSA Fall Business Meeting**  
American Club, Kohler

**November 18-19 - Wisconsin Golf Turf Symposium**  
All Water is Not Created Equal  
American Club, Kohler, WI

**Jan 13 - WTA Turfgrass and Greenscape Expo**  
Boerner Botanical Gardens, Hales Corners

**Feb 2-7 - Golf Industry Show**  
New Orleans, Louisiana