



*Photos by G. Jung*

## Distribution of *Typhula* Species and Varieties in Wisconsin, Utah, Michigan and Minnesota

***Geunhwa Jung, Ph.D.,***  
*University of Massachusetts, Amherst*  
*(jung@psis.umass.edu)*

### Objective

Identify the specific species and variety of *Typhula* snow mold causing fungi found on golf courses in the northern U.S.

## Summary

*Typhula* snow mold diseases is caused by three separate species and three varieties of one of the species and are responsible for the most important winter diseases of turfgrasses in cool climates of the Northern Hemisphere. Since some fungicides may only control a specific species or variety of *Typhula*, it is important to know the distribution of each species and variety to develop effective management strategies for *Typhula*.

Species-specific DNA markers were used to identify *Typhula* species collected on golf courses in Wisconsin, Utah, Michigan, and Minnesota.



## Results

- Samples of three *Typhula* species and three *T. ishikariensis* varieties were collected from 135 golf courses in Wisconsin, Utah, Michigan and Minnesota.
- Sites were identified where each *Typhula* species or variety occurred frequently within the study area, and climatic conditions and biotic factors (species competition and interaction) were correlated with that distribution data.
- The three *Typhula* species were found to occupy distinct ecological niches, but the three *T. ishikariensis* varieties are not adapted to different environments.
- A better understanding of how *Typhula* species and varieties are influenced by their environment can help researchers develop more effective strategies of snow mold control.

### Funded by

Wisconsin  
GCSA



Published in GCM, January 2008, pages 170-175.