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

**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.

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