

Have a dying spruce tree? Fungus may be the culprit



A spruce tree with dead lower branches may be suffering from a fungus disease called cytospora canker. (The Morton Arboretum)

By **Beth Botts**
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In most Chicago suburbs, you can't drive a block without seeing a spruce tree. Norway spruce, blue spruce and white spruce are among the most popular trees in the area, prized for their winter color and ability to screen out the neighbors.

Unfortunately, their popularity is one reason spruces are increasingly vulnerable to fungus diseases, according to Sharon Yiesla, plant knowledge specialist at The Morton Arboretum in Lisle. "Everybody's got a spruce," she said, "and every one of them is a potential host plant."

Volatile weather is another factor. "Over the last few years, we've had a wide range of weather, including dry spells, wet periods with flooding, and really bitter winter days," she said. These fluctuations, especially drought, stress trees and make them more vulnerable to disease.

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Two major fungus diseases afflict spruces in the Chicago area, Yiesla said.

If many branches on the tree have needles that are turning yellow or brown and dropping, the cause may be rhizosphaera needle cast. This fungus infects individual spruce needles and can kill a tree over three or four years.

If you suspect your tree has this disease, contact the Morton Arboretum's Plant Clinic for information on fungicide treatments or call in a certified arborist. Chemical controls only are effective if the disease is caught early, and they must be applied at a specific time of year, Yiesla said.

When entire lower branches on a spruce have died, the problem is more likely to be cytospora canker, Yiesla said. This fungus lives under the bark and destroys the vessels that carry water and nutrients, so the whole branch dries out and dies.

"It usually starts on the lower branches and moves up the tree over several years," she said. Another common symptom is white sap on the trunk or branches.

Cytospora canker is a disease of mature spruce trees, usually older than 15 years. Trees are most likely to be infected if they are planted too closely together or if they are stressed, Yiesla said.

There is no treatment for cytospora canker, according to Yiesla. A tree can live with the disease for a few years — "it's not an immediate death sentence," she said — but branches will continue to die.

Remove every dead branch with a clean pruning cut next to the trunk, she said. Be sure to disinfect your pruners with rubbing alcohol or another disinfectant between pruning cuts. Be diligent about removing all fallen branches and needles from beneath the tree. They may carry the fungus spores.

Reduce stress to the tree by spreading mulch in a wide circle around the trunk to protect the roots and watering it thoroughly any time there has been no rain for a week.

If you decide to remove an unsightly, diseased spruce, consider replacing it with a different kind of tree to reduce the risk from diseases in the future, Yiesla said.

"These spruce diseases are an example of the price we pay for planting too many of the same trees," she said. "More diversity will make it harder for diseases to spread."

For tree and plant advice, contact the Arboretum's Plant Clinic (630-719-2424 or plantclinic@mortonarb.org).

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