

# Fungi unique to PEI

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On a planet that has been poked, prodded and studied by biologists for years, it is becoming increasingly difficult to discover previously unknown forms of life.

However, during field work in the summer of 1984, two biologists working along the shores of Prince Edward Island came up with just such an animal.

More correctly, it was a tiny species of lignicolous (wood-eating) marine fungi that had never before passed beneath the microscopes of biologists engaged in the field of marine mycology - the study of fungi that occur in salt water.

Most marine fungi are found along the shores of the world's oceans, where decomposing material, such as algae, marsh plants and wood provide them with a place to live. They are responsible for what is known as "soft-rot", which is why driftwood is often spongy and easily broken apart.

It has been estimated that there are only 1 percent as many species of fungi in the oceans as there are on land. To date, about 50,000 terrestrial fungi have been described, versus only 500 species of marine fungi.

The new species, give the tongue-twisting name of *Didymosphaeria lignomaris*, was one of 20 found growing on driftwood and intertidal (stationary) wood by Douglas Strongman from the University of New Brunswick, and J. David Miller from Agriculture Canada's Plant Research Centre in Ottawa.

Not surprisingly, the discovery went almost unnoticed, except for publication in a few regional scientific journals.

Apparently, being able to boast that P.E.I. was the only known breeding ground in the world for a certain marine fungi, was not enough to bring fungus watchers rushing to the Island.

Part of the reason may be that the study of marine fungi is still in its infancy, having begun only 40 years ago.

While the other three Atlantic provinces had previously been checked for lignicolous marine fungi as far back as 1960, this was the first such study of Island waters.

In addition to the new species, which was discovered at Gillis Point in Malpeque Bay, 19 others were identified from special wooden traps the biologists had set out in five locations around the Island. These 19 species were new for the coast of P.E.I., but had - except for one - been found before in Nova Scotia, New Brunswick and Newfoundland.

To collect the fungi, wooden blocks of pine, spruce and birch were submerged in about two feet of water anywhere from 30 to 100 feet offshore for five months and then retrieved. Pieces of naturally occurring driftwood, and wood that had become partly buried in sand or wedged in rocks, were also collected.

The samples were returned to UNB in October, 1984. Because the fungi are so small (the largest in the world is only about 4 mm) all identifications had to be made with a microscope.

To the untrained eye, all fungi look similar, but apparently their reproductive organs, called ascocarps, are unique to each species. To see these characteristics, the fungi had to be magnified as much as 850 times by the microscope.

The P.E.I. discovery had no immediate practical value, other than to document the occurrence of the fungi, another reason it was unheralded.

Knowledge of marine fungi might some day help prevent the deterioration that eventually occurs in all wooden marine structures. It is estimated