

From: [Mcquire, Maia Patterson](#)
To: [Abeels, Holly Ann](#);
Subject: FW: Marine Fungi question
Date: Friday, March 18, 2011 8:56:03 AM
Attachments: [ATT00001..htm](#)
[Attachment\(s\) are below.txt](#)

From: Spranger, Michael S
Sent: Tuesday, October 05, 2010 10:52 AM
To: Momol, Tim
Cc: Mcquire, Maia Patterson; Spranger, Michael S
Subject: Fwd: Marine Fungi question

Tim

Below is Information I received from a marine fungus expert I was referred to. Please share as appropriate. I still am gathering information on this topic.

Mike

Begin forwarded message:

From: "Jinx Campbell" <Jinx.Campbell@usm.edu>
To: "Spranger, Michael S" <spranger@ufl.edu>
Subject: RE: Marine Fungi question

Dear Dr Spranger

I apologize for my tardy reply; I was out of town and did not have email contact.

From the photographs this does not look to be an attack by marine fungi. Marine fungi decay wood using a process called "soft rot." Soft rot causes decomposition of cellulose. The fungus enters the wood through a 'pit' (depression) in the wall and the fungal hyphae grow in the lumen of individual cells. They pass through the tertiary wall into the cellulose-rich middle layer, growing along the orientation of the microfibrils. They secrete cellulase enzymes which break down the cellulose. This creates a characteristic pattern of decay, seen as rhomboidal cavities within the cell wall. In other words, the fungus is growing inside the wood and decomposing the wood internally, not on the surface of the wood as seen in the photograph.

There are two other types of wood rot which are caused by terrestrial fungi: brown rot and white rot. These types of rot also have distinctive rot patterns and do not look like the photographs you sent.

I've attached some slides from one of my classes which give some illustrations of what wood attacked and decayed by fungi looks like.

I hope this helps.

Jinx

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<http://www.usm.edu/qcrl/ceg/>
<http://www.usm.edu/qcrl/microbiology/>

Editor of Inoculum: <http://msafungi.org/inoculum>

The latest edition of Inoculum is now on the web at: [http://msafungi.org/wp-content/uploads/Inoculum/61\(4\).pdf](http://msafungi.org/wp-content/uploads/Inoculum/61(4).pdf)

-----Original Message-----

From: Spranger, Michael S [mailto:spranger@ufl.edu]
Sent: Friday, October 01, 2010 4:45 PM
To: Jinx Campbell
Cc: Spranger, Michael S
Subject: Marine Fungi question

Dear Dr. Campbell,
I am need of expert advice. I previously sent you email on 26 September about a possible dock fungus issue. There is contention that an airborne marine fungus may be the cause of fuzzy docks with potential major damage to docks and pilings along our coast. Our initial investigation determined that this was due to salt crystallization process with age of structures. But some representatives of industry are insisting it is marine fungus. I have yet to determine extend of this issue, but would like to rule out if it is marine fungus. Are there marine fungus that could cause this? We may need to do an independent investigation. If so, would you be individual or are there other individuals that might be able to consult to see if this is indeed an issue? Information from industry perspective is below. I also attach letter from professor at MSU who indicates cause is physical. An intriguing question. Any assistance is appreciated.

<http://surfacemod.com/category/dock-fungus-solutions/>

"...The scientific and empirical evidence suggest rapid CCA-treated dock wood deterioration is principally due to infection with a fungus, and is exacerbated by macro salt crystallization

in some cases. The extent and rate of deterioration varies from place to place and tends to be more aggressive and pervasive in warmer regions and in warmer months. The infectious fungal attack progresses to structural failure if left untreated and painting or wrapping fail to arrest attack..."

Mike Spranger, PhD

Associate Dean for Environment and Natural Resources University of Florida IFAS Extension
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[wood decay.pdf](#)



