

## 2010 *Bridgeoporus nobilissimus* in non-Abies Host Survey Report

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### Summary

In this project, wood cores taken from trees in areas with known sites of *Bridgeoporus nobilissimus* were tested for *B. nobilissimus* DNA using techniques developed in previous work. Prior to this study, *B. nobilissimus* had only been known to fruit on *Abies amabilis* or *A. procera* trees, and the ability of other species of trees to host the fungus had not been tested. In this study samples were taken from *Pseudotsuga menziesii*, *Tsuga heterophylla*, and *Thuja plicata*. Surprisingly all three of these species<sup>1</sup> were found to host the fungus. This work extends the conclusion of previous studies showing that *B. nobilissimus* is more prevalent in the environment than is indicated by its conks.

### Methods

Sample collection methods used in this project were the same as those described in Appendix A of "2009 *B. nobilissimus* Survey Report". Samples were collected at a subset of the plots established in the 2009 study. Lab methods were the same. In the course of this work, some new PCR primers, specific to *B. nobilissimus*, were designed and tested. These primers were found to be as effective as the previously described primer pair.

Since the positive results in the non-*Abies* hosts were unexpected, all positive samples were retested in PCR. In addition, a restriction analysis test was developed and used to confirm that the markers generated were from *B. nobilissimus*. In this test, the restriction enzyme Eco47I was used to digest PCR products containing the *B. nobilissimus* marker. The marker has one Eco47I restriction site in a non-coding region of the marker. Restriction analysis showed that the marker generated by each of the positive samples had this restriction site, confirming that the markers were generated by *B. nobilissimus*.

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<sup>1</sup> While testing was being done for this project, a *B. nobilissimus* conk was found on an *Abies grandis* in Redwood National Park, CA.

## Results Summary

Site	Plot	Fraction of tested <i>Abies</i> with <i>Brno</i> (2009)	Fraction of tested non- <i>Abies</i> with <i>Brno</i>
MBS	1	.56	.23
Mt. Rainier	1	.57	0
Wildcat Mtn.	2	.12	.08
Snow Peak	1	.29	.12