NOV 20, 2020

🌐 Fungal Extraction from Beetle Galleries

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Protocols Bark Beetle Mycobiome

Bark Beetle Mycobiome Research Coordination Network

ABSTRACT

This protocol describes how to extract fungi from beetle galleries.

This protocol is part of the Bark Beetle Mycobiome (BBM) Research Coordination Network. For more information on the BBM international network: Hulcr J, Barnes I, De Beer ZW, Duong TA, Gazis R, Johnson AJ, Jusino MA, Kasson MT, Li Y, Lynch S, Mayers C, Musvuugwa T, Roets F, Seltsmann KC, Six D, Vanderpool D, & Villari C. 2020. Bark beetle mycobiome: collaboratively defined research priorities on a widespread insect-fungus symbiosis. *Symbiosis* 81: 101–113 <https://doi.org/10.1007/s13199-020-00686-9>.

OPEN ACCESS

DOI:
dx.doi.org/10.17504/protocols.io.bnutmewn

Document Citation: You Li, Jiri Hulcr 2020. Fungal Extraction from Beetle Galleries. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.bnutmewn>

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Created: Oct 23, 2020

Last Modified: Nov 20, 2020

DOCUMENT integer ID:
43635

Materials

(all autoclaved)

- eppendorf vials
- Pestles or some other grinding tool
- scalpel
- Reserve hood time

- strong forceps
- vials
- ethanol in petri dish for dipping the forceps & scalpel into
- vial rack
- (chisel)
- (pruner)
- pipette
- 1000 uL pipette tips
- EtOH bath

For field sampling of beetle associated fungi:

- ethanol
- squirt bottle (or separate vials with ethanol)
- hard forceps
- scalpel
- scalpel blades
- lighter (for forceps & scalpel sterilization)
- ziploc bags
- permanent markers (alcohol-resistant)

Procedure

Scrape piece of 1 gallery in the hood, scrape into

a. 1 ml of 1X PBS AUTOCLAVED phosphate buffer saline solution in tube

3. mortar & pestle

4. plate directly, refrigeration decreases growing success

5. Plate three different dilutions, refer to the dilution protocol.