



# Morphological Differences Between Microporellus dealbatus and Lentinus crinitus.



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## INTRODUCTION

The purpose of this experiment was to determine the gross and microscopic differences between *Lentinus crinitus* and *Microporellus dealbatus*. These two mushrooms belong to the same family and thrive on similar substrates.

## Abstract

*M. dealbatus* and *L. crinitus*, two different species of mushrooms found in The Big Thicket, had microscopic and gross morphological differences. The two specimens were observed using dissecting, Hitachi SEM TM – 1000, and S - 3400N microscopes. *M. dealbatus* had ellipsoid spores and spores of *L. crinitus* were cylindrical. The stipe and pelius of both specimens varied in size. *L. crinitus* had gills while *M. dealbatus* had pores and tubes.

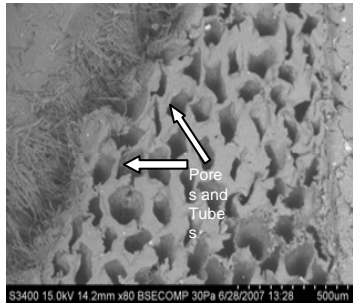


Fig.1 *M. dealbatus* - Pores and Tubes.

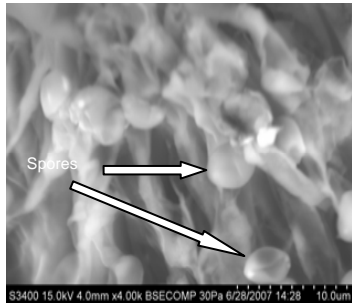


Fig.2 *M. dealbatus* – Spores.



Fig.3 *M. dealbatus* – Pelius.

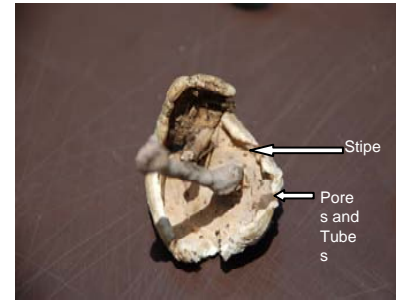


Fig.4 *M. dealbatus* - Stipe, Pores and tubes.

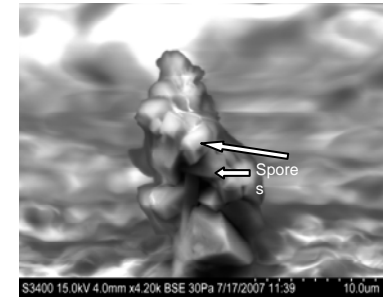


Fig.5 *L. crinitus* – Spores.

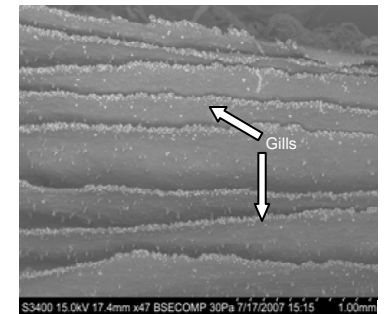


Fig.6 *L. crinitus* – Gills.

## MATERIALS and METHODS

Specimens were collected in the Lance Rosier Unit of the Big Thicket National Preserve in Saratoga, TX during June 2007. Specimens were collected by cutting at the base of the stipe using a Swiss army knife to ensure collection of the entire fruiting body. Specimens were placed in wax bags to prevent the build up of moisture, bags were put in baskets and transported to the Big Thicket National Park Research Center. At the research center the specimens were examined using dissecting and Hitachi TM – 1000 (SEM) microscopes. Specimens were identified, labeled, and put in a dehydrator to preserve the specimens for later addition to museum collections.

Specimens were brought back to Eastfield College and placed in a freezer. Specimens were placed on a (SEM) stub to be observed using Hitachi TM – 1000 and S – 3400N (SEM) microscopes.

## RESULTS

The pores of *M. dealbatus* were hexagonal in shape and ranged in size from 400 um to 1500 um (fig.1). Spores in the tube were ellipsoid (fig.2). The pelius had a range in diameter of 3.4 – 4.7cm and was kidney shaped (fig.3). The stipes ranged in length from 4.4 – 7.5 cm (fig.4). Tube depth ranged from 1 - 8 mm (fig.4). The stipe of *M. dealbatus* was not hollow.

Spores were cylindrical in shape (fig.5). The gills of *L. crinitus* were 1500 to 2000 um apart (fig.6). The stipes ranged in length between 1.9 – 2.6 cm (fig.7). The pelius ranged in diameter from 2.2 – 4.2 cm and was funnel shaped (fig.8). The stipe had a hollow center.

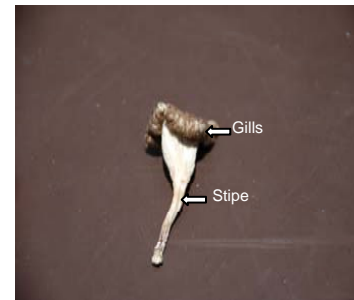


Fig.7 *L. crinitus* – Stipe and Gills.



Fig.8 *L. crinitus* – Pelius.

## Discussion

*M. dealbatus* had pores and *L. crinitus* had gills. These two specimen are in the same family but have major morphological differences based on the above results.

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