

## I. INTRODUCTION

### 1. 1 Background

Indonesia is recognized as a world megabiodiversity country among 17 mega-diverse countries, 70 percent of the world's biodiversity in Indonesia (Sharma & Arya 2016). Including the diversity of microorganisms such as fungus. According to Hawksworth and Lücking (2017), the diversity of fungus is estimated to be around 2.2 to 3.8 million species worldwide. At present, there are around 3 million mushrooms with only 140,000 species that produce fruit bodies of sufficient size and structures suitable to be considered mushrooms. Various kinds of mushrooms are one of the important natural resources that used traditionally for food. It is estimated that there are 1,069 species of fungus that have been reported to be used for food needs throughout the world (Boa, 2004).

Indonesia is a country with the highest number of mountains in the world, namely 129 mountains (Sudarjat, 2011). Mount Talang is one of the mountains that is still active today, Mount Talang located in Solok District, West Sumatra Province, Indonesia. The topography of this area is flat to hilly with altitude ranging from 1,200 masl - 2,597 masl. Mount Talang is a stratovolcano type mountain with active mountain status, the mountain is covered in tropical rainforests with high rainfall.

According to Suharna (1993) In forest ecosystems, fungus act as decomposers together with bacteria and protozoa which act as decomposition of organic matter to accelerate the material cycle, mushrooms help fertilize the soil through the provision of nutrients for plants. These edible fungus have been collected and consumed by people thousands of years ago. Not only for food needs, but the mushroom bracket can also be used for health care, as well as in the

prevention and treatment of diseases. According to Wong and Cheung (2001), edible fungus contain large amounts of protein, fibre, vitamins, and minerals and low fat. They also have various benefits for health benefits and can be used to treat many human diseases such as cancer, circulatory system disorders and diabetes (Kim & Song, 2014).

Inventory and information on biodiversity is an important component in efforts to manage resource conservation in Indonesia. Based on the results of the survey on Mount Talang which is supported by relatively high humidity it becomes an indication for fungal growth because fungus growth is very supportive in humid conditions and with rich nutrient in environments derived from wood residues from dead trees (Suriawiria, 1986).

Several related studies conducted by Putra, et al. (2018) in the mekarsari tourism park in West Java found as many as 20 species and 16 macrofungus genus. In the Ujung Kulon National Park, 6 genera and 8 species of soil fungus and dead leaves were found. In the mountain threshold of North Sulawesi, 29 species of macrophages were found (Arini & Margareta, 2016). In this case, there has been no research on high-level fungal species on Mount Talang and its potential opportunities.

## **1.2 Formulation of the Problem**

Based on the description above, the problem of this research is can be formulated as follows:

1. What Kind of mushrooms Basidiomycetes in Mount Talang, West Sumatra?

## **1.3. Purpose of the Research**

This research aims to:

1. Inventory the kind of fungus basidiomycetes in Mount Talang, West Sumatra.

#### 1.4 Significance of the Research

The results of this research are expected to be useful in the development of science, providing information on the existence of the basidiomycetes fungus in Mount Talang, West Sumatra to become more specific data information in the field of mycology.

