

# Analysis of Plant Biodiversity

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## Analysis of Plant Biodiversity Using Transect Method in Eden Park Forest 100

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### ABSTRACT.

This Research is to know the analysis of plant biodiversity using Transect Method in Eden Park Forest 100. Samples of this study is all plants that are in the Eden Park Forest 100 of 1 hectare with the size of the entire 40 hectares. They are widely used methods. Forest Park Eden 100 is a tropical rain forests located in Lumban Rang North Sionggang Village, Lumban Julu, Toba Samosir, North Sumatera Province. Within this forest there are various types of plant diversity that are potential sources. This study aims to determine the diversity of plant species in the forest of Eden Park Forest 100. Sample is given using quadratic Transect Method. Quadratic Transects are quadratic methods also called plot methods. Data retrieval is done by the quadratic transect method. From the results of data collection, found 155 species of plants with an important index value of 1200.92. The species that has the highest density value on the seedlings is 374 while the lowest density value in the tree is 0.629. Forest Garden of Eden 100 is great for the development of teaching materials with Transect. With this diversity of plants, Eden Park Forest 100 has potential as a protected forest area for resource use.

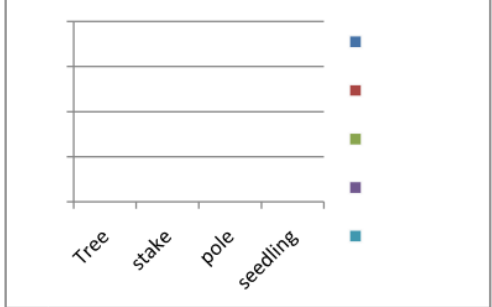
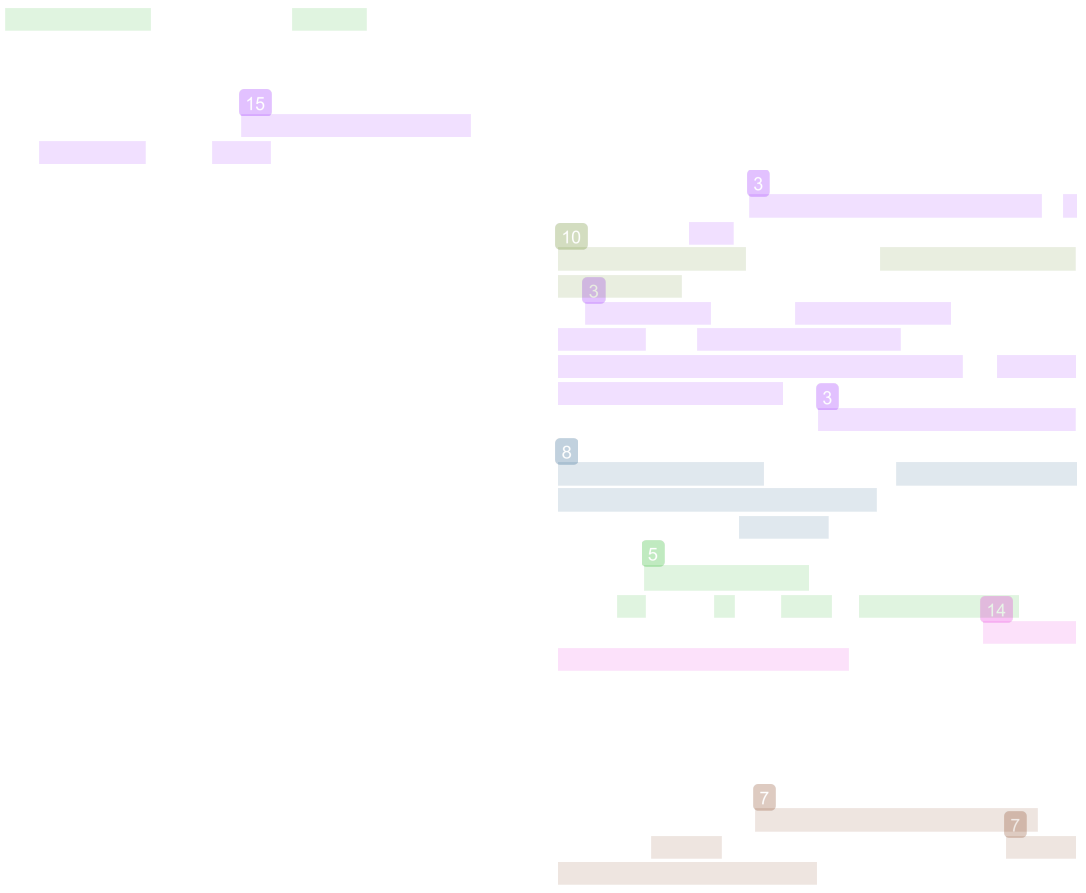
### INTRODUCTION

Forest is an ecosystem in which there are various components and has a very high biodiversity and as a germplasm warehouse of various types of plants and if the forest is not treated the forest will be damaged so that it can be ensured that germplasm erosion will result in the extinction of various life in forests and declining biodiversity, therefore it should be noted that biodiversity is a very useful natural resource. Forest Park Eden 100 located in Lumbang Rang, Sionggang Utara village, Lumban Julu District, Toba Samosir Regency, North Sumatera Province is one of the forests that has biodiversity that lives in the forest. Forests have very high diversity so that the Taman Eden 100 forest is very suitable to be used to analyze the density of plant diversity. From the results of a survey conducted on 12 March 2018 there are rare plants with flora that do not yet have a scientific name and even many still use the name Batak language, and on 1 May 2018 research was conducted to obtain the results of analysis of diversity in the forest of Eden Park 100. The diversity of the typical Batak plants in Eden 100 is a special attraction for visitors, such as sampinur, hariara, jabi-jabi, tahul-tahul, andaliman, bintatar, sotul and other plants. The fig tree whose seeds are intentionally imported directly from Israel such as the butter nut tree from the Amazon forest both trees also flourish. The manager provides locations and seeds if visitors want to plant trees and are allowed to put name plate labels according to the name and origin of tourists. By looking at the condition of this forest it has great potential that needs to be developed that can support scientific development and improvement of student science process skills,

and this forest as a "natural laboratory". Forest Park Eden 100 has a vision: "The greatness of God is maintained for all people through His creation that is able to support the needs of the ecosystem of the Lake Toba region". Furthermore, they have a mission: (1) to create pilot villages in agriculture, animal husbandry and tourism; (2) making agrotourism projects; (3) conducting research in agriculture and the Environment; (4) helping the government and the community in an effort to preserve the nature of Lake Toba; and (5) preserve the forest and its contents at the Eden garden agrotourism location. To carry out biodiversity analysis in the Taman Eden 100 forest, it is necessary to use the transect method to determine a certain level of diversity, the transect method used in Taman Eden 100 is the quadratic transect method. This method is one form of sample can be in the form of a rectangle or circle with a certain area, so we can calculate the density, frequency, dominance and the value of the percents. This is the driving force for conducting research studies on plant diversity, considering that at present the forest is very difficult to find and its location is also very far from the student learning environment. With a number of considerations such as time, facilities and costs, the forest of Eden Park which is very close to the location of the community. Based on the background of the above problems, the authors are interested in following the Research Umbrella Research Team PDUPT with the title "Analysis of Plant Biodiversity Using the Transect Method in the Eden Park Forest 100"

### Experimental Method

The research design used was calculating plant diversity analysis and the research method used in



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1

A group of three horizontal bars in a light red color. The first bar is the longest, followed by a shorter one, and then a very short one.

6

A group of four horizontal bars in a light yellow color. The first bar is short, the second is long, the third is medium, and the fourth is very short.

2

A single horizontal bar in a light pink color, which is the longest bar in this group.

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