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Diversity of Angiospermae Plant Class Liliopsida in Mount Nglanggeran

Bayu Setya Aji Nugraha*, Widodo, Rendi Yuntara, Normalita
Department of Biology Education, Faculty of Science and Technology, UIN Sunan Kalijaga
Jl. Marsda Adisucipto, No. 1 Yogyakarta 55281, Tel. +62-274-540971, Fax. +62-274-519739, Indonesia.

Author correspondency*:
bayu.08114@gmail.com

Abstract

Nglanggeran is a place that has a high plant diversity and there are many unique and unidentified wild plants. This study aims to list liliopside class plants which found around the climbing route. The angiosperm plants in the liliopside class found around the climbing route were successfully identified and consisted of 40 species belong to 17 families.

Keywords: Diversity plants; Liliopsida; Mount Nglanggeran

INTRODUCTION

Indonesia is a country with a high level of plant diversity of approximately 30 thousand species of 40 thousand species of plants that exist in the world (Fahrurozi, 2014). The level endemicity of Indonesian flora is recorded between 40-50% of the total flora species on each island except Sumatra island which is estimated at only 23% (LIPI, 2014). According to Bappenas (2016), this data is not accurate and data collection and name validation are still needed. The species that have been identified and recorded only reach 50% of the total number of flora recorded, that is 19,112 species. But the rate of extinction and reduced diversity of plant species has accelerated. This is a problem and a challenge that must be solved. Another problem where the majority of research focuses only on horticulture plants and ignores wild plants that have not been identified. The data about wild plants can be applied in other field as health, food, environmental and etc. (Widodo, 2015).

Mount Nglanggeran is a place that has high plant diversity and there are many wild plants that have not been identified. Widodo (2015) in his exploration on Mount Nglanggeran found various types of unique plants and are rarely found in residential areas. Some of these plants are also found around the region of Baturagung. The plant is not recognized by the people and its local name is unknown. Probably, the local name of the plant had known in the past but the knowledge does not pass to the next generation. This shows why taxonomic and systematic studies are needed so that knowledge of plants can be passed onto the next generation.

This paper aimed to list the diversity of Liliopsida plants wich found around the climbing route of Ngelanggeran Volcano.

MATERIALS AND METHODS

This research is a field research that uses survey and exploration methods. Equipments for observation and collection consist of: Nikon D320 digital camera and Fuji Mirrorless, smartphones, stationery, observation sheets, Maps applications, and complete plant books. This research is divided into three stages, namely exploration of climbing routes, collection of photo specimens, and discovery of plants. Plant were indentify using various literature and matching with herbariums and illustrations/images in the literature for the discovery of specimens found.

RESULT AND DISCUSSION

Angiosperms of the Liliopsida class found around the Nglanggeran volcano were 39 species grouped in 16 families (Table 1). The species are grouped into family araceae, two species from commelinaceae, one species from costaceae, one species from hypoxidaceae, four species from zingiberaceae, six species from orchidaceae, five species from dioscoreaceae, one species from pandanaceae, three species from smiles, one species of agavaceae, one species of tacaceae, one species of liliaceae, and one species of colchiaceae (Figure 1).

Table 1. Liliopsida class plants found around the Nglanggeran volcano climbing trail.

Family	Species Name	Family	Species Name
Araceae	*Alocasia crassifolia*	Flagellariaceae	*Flagellaria indica*
	Amorphophallus variabilis	Hypoxidaceae	*Curculigo latifolia*
	Anadendrum latifolium	Liliaceae	*Zephyranthes rosea*
	Epripemnum aureum	Orchidaceae	*Dendrobium crumenatum*
	Caladium sp		*Liparis* sp
	Pothos scandens		*Nervilia plicata*
	Typonium trilobatum		*Pholidota imbricata*
	Syngonium podophyllum		*Pecteilis susannae*
Arecaceae	*Arenga pinnata*		*Coelogyne trinervis*
Colchicaceae	*Gloriosa superba*	Pandanaceae	*Pandanus bouetii*
Commelinaceae	*Cyanotis cristata*	Smilacaceae	*Smilax spinosa*
	Commelina difusa		*Smilax anceps*
Costaceae	*Costus speciosus*		*Smilax celebica*
Cyperaceae	*Kyllinga nemoralis*	Tacaceae	*Taca palmata*
	Scleria laevis	Zingiberaceae	*Curcuma longa*
	Cyperus imbricatus		*Globba racemosa*
	Cyperus rotundus		*Zingiber zerumbet*
Dioscoreaceae	*Dioscore bulbifera*		
	Dioscorea alata		
	Disocorea hispida		
	Dioscorea oppositifolia		
	Dioscorea pentaphylla		

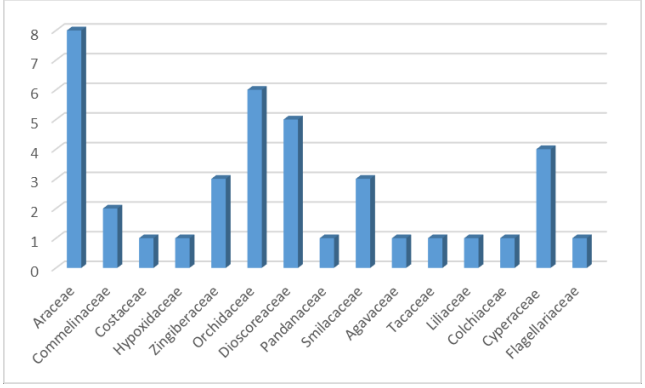

Figure 1. Diagram of plant family class of liliopsida

Araceae is the most abundant family of species, among the 8 species found, *Alocasia crassifolia* and *Amorphophallus variabilis* are abundant species and are often found around climbing routes. *Alocasia crassifolia* has large leafy features, up to 1.2 x 2 m round shape, the leaf veins are very clear. The leaves are dark green, while the bottom is dull green, has a long leaf stalk reaching 0.4 - 1 m. Male and female flowering is located on a long-stemmed cob which exits at the end of the stem. Egg-shaped fruit with orange color when ripe. The fruit contains only one seed. This plant prefers in wet environment and can be found on the banks of rivers, lakes and mountain slopes which are rather humid (Suhono et al., 2010). Whereas *Amorphophallus variabilis* has the characteristics of the leaf stalk morphology varies widely, the surface of the leaf stalk is flat or rough, the color of the tuber skin is white, green, gray or purple. (Afifah et al, 2014).

Figure 2. *Alocasia crassifolia*.

Figure 3. *Amorphophallus variabilis*.

Some unique species that are rarely found include *Pothos scandens*, *Curculigo latifolia*, *Nervilia plicata*, *Pholidota imbricata*, and *Smilax anceps*.

Figure 4. *Pholidota imbricate*.

Figure 5. *Smilax anceps*.

CONCLUSION

The diversity of plants in the Liliopasida class at the Ancient Volcano Nglanggeran consists of 39 species belong to 16 families. Eight species are grouped into family araceae, two species from commelinaceae, one species from costaceae, one species from hypoxidaceae, four species from zingiberaceae, six species from orchidaceae, five species from dioscoreaceae, one species from pandanaceae, three species from smiles, one species of agavaceae, one species of tacaceae, one species of liliaceae, and one species of colchiaceae. Araceae is the most abundant family of species, among the 8 species found, *Alocasia crassifolia* and *Amorphophallus variabilis* are abundant species and are often found around climbing routes. Some unique species that are rarely found include *Pothos scandens*, *Curculigo latifolia*, *Nervilia plicata*, *Pholidota imbricata*, dan *Smilax anceps*.

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Alocasia crassifolia


Amorphophallus variabilis


Anadendrum latifolium


Caladium sp


Commelina difusa


Costus speciosus


Curculigo latifolia


Curcuma longa


Cyanotis cristata


Cyperus imbricatus


Cyrtococum sp.


Dendrobium crumenatum


Dioscorea sp.


Dioscorea bulbifera


Dioscorea alata


Dioscorea hispida


Dioscorea oppositifolia


Dioscprea pentaphylla


Epripemnum aureum


Globba racemose


Gloriosa superba


Kyllinga nemoralis


Liparis sp.


Nervilia plicata

Pandanus bouetii

Pholidota imbricate

Photos scandens

Scleria laevis

Smilax

Smilax spinose

Syngonium podophyllum

Taca palmata

Typhonium trilobatum

Zephyranthes rosea

Zingiber zerumbet