COMPOSITION OF POACEAE FAMILY IN LAMPAGEU VILLAGE FOREST AREA, UJONG PANCU, ACEH BESAR DISTRICT

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ABSTRACT

Lampageu Ujong Pancu Village Forest Area in Aceh Besar Regency is a habitat rich in biodiversity, including species from the Poaceae family which play an important role in the local ecosystem. The aim of the research is to identify and analyze the distribution of seven grass species, namely basket grass (*Oplismerus hirtellus*), white grass (*Leersia virginica Wild*), bebesan (*Oplimenus burmanni*), grass gerinting (*Cynodon dactylon*), bone grass (*Eleusine indica*) and kiyuyu grass (*Panicum brevifolium L.*). This research was carried out using a descriptive method with observational techniques, namely observing directly in the field to collect data. The research results showed that the seven types of grass were basket grass (*Oplismerus hirtellus*), white grass (*Leersia virginica Wild*), bebesan (*Oplimenus burmanni*), grass gerinting (*Cynodon dactylon*), bone grass (*Eleusine indica*), blady grass (*Imperata cylindrica*) and kiyuyu grass (*Panicum brevifolium L.*). has good adaptation to environmental conditions in the Lampageu Ujong Pancu Village Forest area. The descriptive observasional is effective in identifying and measuring the population and distribution of Poaceae vegetation in the region. This research provides a better understanding of the composition and ecology of Poaceae vegetation, which can be used for future forest conservation and management, as well as the environmental factors that influence it, which can become the basis for more sustainable conservation and environmental management efforts in the area .
Keywords**:** poaceae family, forest area, basket grass, white grass, kiyuyu gras

ABSTRAK

Kawasan Hutan Desa Lampageu Ujong Pancu di Kabupaten Aceh Besar merupakan habitat yang kaya akan keanekaragaman hayati, termasuk spesies dari famili *Poaceae* yang berperan penting dalam ekosistem lokal. Tujuan penelitian ini yaitu untuk mengidentifikasi dan menganalisis distribusi tujuh spesies rumput, yaitu rumput keranjang (*Oplismerus hirtellus*), rumput putih (*Leersia virginica Wild*), bebesan (*Oplimenus burmanni*), rumput gerinting (*Cynodon dactylon*), rumput belulang (*Eleusine indica*) dan kiyuyu grass (*Panicum brevifolium L.*).

Penelitian ini dilakukan dengan metode deskriptif dengan teknik observatif yaitu mengamati secara langsung di lapangan untuk mengumpulkan data. Hasil penelitian menunjukkan bahwa ketujuh jenis rumput yakni rumput keranjang (*Oplismerus hirtellus*), rumput putih (*Leersia virginica Wild*), bebesan (*Oplimenus burmanni*), rumput gerinting (*Cynodon dactylon*), rumput belulang (*Eleusine indica*), alang-alang (*Imperata cylindrica*) dan kiyuyu grass (*Panicum brevifolium L.*) memiliki adaptasi yang baik terhadap kondisi lingkungan di kawasan Hutan Desa Lampageu Ujong Pancu. Metode deskriptif observatif efektif dalam mengidentifikasi dan mengukur populasi serta distribusi vegetasi Poaceae di wilayah tersebut. Penelitian ini memberikan pemahaman yang lebih baik tentang komposisi dan ekologi vegetasi *Poaceae*, yang dapat digunakan untuk konservasi dan pengelolaan hutan di masa mendatang, serta faktor-faktor lingkungan yang mempengaruhinya, yang dapat menjadi dasar bagi upaya konservasi dan pengelolaan lingkungan yang lebih berkelanjutan di kawasan tersebut.
Keywords**:** famili poaceae, kawasan hutan, rumput keranjang, rumput putih, kiyuyu gras

A. INTRODUCTION

The Poaceae family, also known as the grass family, is one of the plant families with the widest distribution in the world. Kolo, et al (2022) explained that the Poaceae family has very high adaptability, wide distribution, and can grow on dry and flooded land. Plants in this family have an important ecological role in various ecosystems, including forests, grasslands, and agricultural lands. Research on the composition of the Poaceae family can provide insight into the biodiversity, ecology, and potential uses of these plants. Ulfa (2023) explained that biodiversity includes various types of flora and fauna, including seed plants such as Basket Grass. This biodiversity plays an important role in human life, providing basic needs such as food, clothing, and shelter. Furthermore, Nur, & Chairul, (2023) the Poaceae family is a plant that has a very large number and is easy to find such as on roadsides, in forests, hills, and sloping areas. It is suspected that the Poaceae family is included in the group of plants that are widely distributed. This is in

accordance with the opinion of Tjitrosoepomo (2009), who stated that the Poaceae family in terms of pollination and distribution occurs through wind, so that wind speed can be a supporting factor in the distribution and pollination of grass plants from the Poaceae family. This family can grow and live in almost all open or protected areas. The Poaceae family is cosmopolitan and has around 500 genera and 3000 species. The Lampageu Ujong Pancu Village Forest in Aceh Besar Regency is one of the important ecosystems rich in biodiversity (Utari, 2023). The Lampageu Ujong Pancu Village Forest in Aceh Besar Regency is one of the important ecosystems rich in biodiversity. Various types of plants, including the Poaceae family, can be found in this forest. One example of a plant found in this forest is: Basket grass (Oplismerus Hirtellus): This type of grass is found in the Lampageu Ujong Pancu Village forest, showing high biodiversity in this ecosystem, basket grass has a terrestrial habitat, and can live in dry or wet soil conditions. This plant is easily found growing on roadsides, forests, gardens, and empty lands. The plant was found at an altitude of 1389 and 865 meters above sea level with an air temperature of 23.38oC, soil pH of 5.99, soil moisture of 35.3%, air humidity of 39.6% and light intensity of 2142.5/20,000 C (Pusfa, 2022). The biodiversity in this forest is very important for ecosystem balance and also has high ecological value. Therefore, protection and management of this forest are very necessary to maintain the biodiversity in it. Biodiversity in forest areas functions to maintain ecological balance, provide resources for local communities, and deal with climate change (Ulfah, et al 2023). However, pressure from human activities such as deforestation, land use changes, and climate change threaten the sustainability of this ecosystem. To develop an effective conservation strategy, a deep understanding of the species composition in this area is needed, especially the Poaceae family which is often the dominant component of the forest understory vegetation. Steenis (2013), in general, species of the Poaceae family can live at altitudes ranging from 1-2,700 meters above sea level. The existence of various species of the Poaceae family in this area has a significant role in maintaining ecological balance and providing economic benefits to the surrounding community. However, a deep understanding of the composition and distribution of Poaceae species in this area is

still limited. With threats such as climate change, deforestation, and other human activities, it is important to identify and analyze the diversity of Poaceae species in order to develop effective conservation strategies.

The composition of the Poaceae family in this village forest area is not yet known for certain, information obtained from continuous research results is still needed to explain the dynamics of the forest that occurs. Given the importance of this information, a study has been conducted aimed at determining the composition of the Poaceae family in the Lampageu Ujong Pancu Village Forest area, Aceh Besar Regency.

B. RESEARCH METHOD

This research is a descriptive study with an observational technique, namely observing directly in the field to collect data. The aim is to identify plants of the Poaceae family in Lampageu Ujong Pancu Village.

This research was conducted in the Lampageu Village Forest, Ujong Pancu District, Aceh Besar Regency, Aceh Province, Indonesia in June 2023. The results of the observations were documented and the specimens were taken home to be identified at the Basic Laboratory of Biology Education Uin Ar-Raniry.

The materials used in the study were various Poaceae families. The tools needed in this study were smartphones, sample plastic, name labels, and stationery.

Data on determining the names of the observed plant species were obtained through observation of morphological characteristics and relying on other special characteristics. These characteristics include stem shape, leaf structure, leaf edges, leaf surfaces and so on.

C. RESULTS AND DISCUSSION

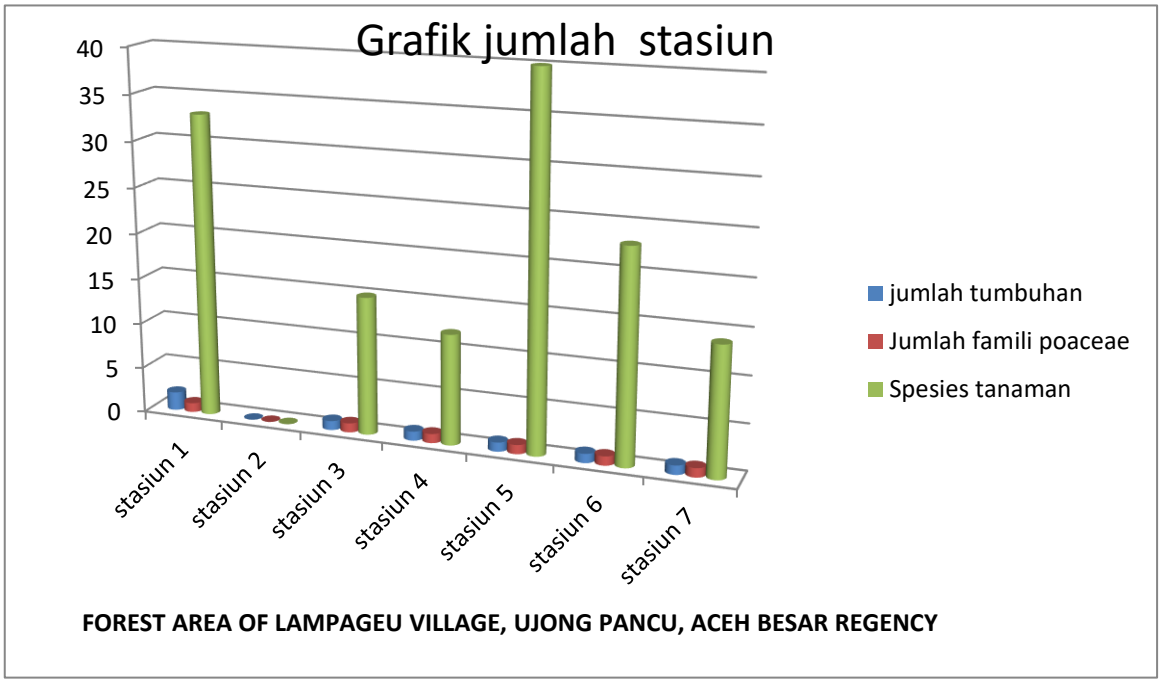
Based on the observations that have been made, plants from the Poaceae family that grow in the Lampageu Ujong Pancu Village Forest area, Aceh Besar Regency can be seen in Table 1.

Table 1 Poaceae family found in the Lampageu Ujong Pancu Village Forest area

No	Image	Regional Name	Name Latin	Klasification
1		Rumput keranjang (28 spesies)	*Oplismenus hirtellus*	Kingdom: Plantae Subkingdom: Tracheobionta Superdivisi: Spermatophyta Divisi: Magnoliophyta Kelas: Liliopsida Subkelas: Commelinidae Ordo: Poales Famili: Poaceae Genus: Oplismenus Spesies: *Oplismenus hirtellus*
2		Rumput putih (5 spesies)	*Leersia virginica Willd.*	Kingdom: Plantae Subkingdom: Tracheobionta Superdivisi: Spermatophyta Divisi: Magnoliophyta Kelas: Liliopsida Subkelas: Commelinidae Ordo: Poales Famili: Poaceae Genus: Leersia Spesies: *Leersia virginica Willd.*
3		Rumput gerinting (14 spesies)	*Cynodon dactylon*	Kingdom: Plantae Subkingdom: Tracheobionta Superdivisi: Spermatophyta Divisi: Magnoliophyta Kelas: Liliopsida Subkelas: Commelinidae Ordo: Poales Famili: Poaceae

				Genus: Cynodon Spesies: *Cynodon dactylon*
4		Rumput belulang (15 spesies)	*Eleusine indica*	Kingdom: Plantae Subkingdom: Tracheobionta Superdivisi: Spermatophyta Divisi: Magnoliophyta Kelas: Liliopsida Subkelas: Commelinidae Ordo: Poales Famili: Poaceae Genus: Eleusine Spesies: *Eleusine indica*
5		Bebesan (23 spesies)	*Oplimenus burmanni*	Kingdom: Plantae Divisi: Tracheophyta Subdivisi: Spermatophytes Kelas: Subkelas: Ordo: Poales Famili: Poaceae Genus: Oplimenus Spesies: *Oplimenus burmanni*
6		Kiyuyu grass 40 spesies)	*Paniculum brevifolium*	Kingdom: Plantae Subkingdom: Superdivisi: Spermatophyta Divisi: Tracheophyta Kelas: Subkelas: Ordo: Poales Famili: Poaceae Genus: Panicum Spesies: *Paniculum brevifolium*

7		Alang-alang (12 spesies)	*Imperata cylindrica*	Kingdom: Plantae Subkingdom: Tracheobionta Superdivisi: Spermatophyta Divisi: Magnoliophyta Kelas: Liliopsida Subkelas: Commelinidae Ordo: Poales Famili: Poaceae Genus: Imperata Spesies: *Imperata cylindrica*



FOREST AREA OF LAMPAGEU VILLAGE, UJONG PANCU, ACEH BESAR REGENCY

The results of the study showed that there were seven types of plants from the Poaceae family, namely basket grass (Oplismerus hirtellus), white grass (Leersia virniguca Wild), bebesan (Oplimenus burmanni), gerinting grass (Cynodon dactylon), belulang grass (Eleusine indica), cogongrass (Imperata cylindrica) and kiyuyu gras (Panicum brevifolium L.). Each genus classification only found one species, except for the genus Oplismenus which had two species. This indicates that Oplismenus is the dominant genus of the Poaceae family found in the Lampageu Ujong Pancu Village Forest area, Aceh Besar Regency. The plants

from the Poaceae family that dominate at the observation location are from the genus Oplismenus, where two species were found, namely Oplismenus burmanni and Oplismenus hirtellus. This wide distribution may be an indication that Basket Grass has an advantage in adapting to various environmental conditions in the area (Sombo, et al 2020). Environmental factors such as soil conditions, sunlight levels, air humidity, and other factors can play an important role in supporting its growth and distribution. This plant may have better tolerance to various types of soil and can grow well in different sunlight conditions. Appropriate air humidity can also be a factor that supports the growth of Basket Grass. In addition to environmental factors, internal plant factors such as genetics and morphology can also influence this wide distribution. Basket Grass may have genetic characteristics that allow it to grow and develop well in various environmental conditions (Krishidaya, et al 2022). Thus, a deeper understanding of the environmental and internal plant factors that influence the distribution of these two plants can provide valuable insights into conservation and ecosystem management efforts in the Lampageu Ujong Pancu Village Forest area, Aceh Besar Regency.

These six types of grass have an important role in the forest ecosystem, each with different growth preferences according to the environmental conditions in which they grow. The genus Oplismenus, for example, is found to thrive in areas with moderate to low light intensity and fairly moist soil. This grass is often used as animal feed because its wide and long leaves provide good nutritional value for the livestock that eat it.

White grass (Leersia virniguca Wild) tends to grow in areas with high humidity and low light intensity (Maulani, 2022). This grass has thin and smooth leaves, so it is often found on riverbanks or swamps. The presence of White grass can help maintain the moisture of the surrounding soil and provide protection for the aquatic ecosystem, as well as being a shelter for various types of aquatic fauna. Meanwhile, Kiyuyu gras (Panicum brevifolium L.) grows well in fairly fertile soil with moderate to high light intensity. This grass is often found in open areas or roadsides, contributing to maintaining soil stability and preventing erosion, as well as providing habitat for various types of insects and other small animals. Thus, these

three types of grass provide valuable contributions to maintaining the balance of the forest ecosystem, both as a provider of feed for livestock, maintaining soil moisture, and as a habitat for various types of fauna.

Imperata cylindrica is an annual grass that grows wild and is widely distributed in forests, gardens, or other open environments. Imperata from the genus Imperata is a type of weed that is spread across various tropical and subtropical countries. This plant is classified as a type of annual grass that likes sunlight and has rhizomes that spread widely under the soil surface. Imperata can reproduce by seeds and rhizomes. The factors that cause this plant to spread quickly are because its seeds are easily carried by the wind, its rhizomes easily penetrate the soil, and environmental conditions in the form of fertile soil, intensive sunlight, and humid environmental temperatures (Jalaluddin, 2014). Cogongrass (Imperata cylindrica) can be used as a traditional medicine, especially the use of the roots which are efficacious for treating high blood pressure, back pain, kidney inflammation, and increasing stamina because they contain secondary metabolite compounds such as quercetin flavonoids which act as tonics that provide a tonic effect on the body (Sumarsono, 2019).

Gerinting grass (Cynodon dactylon) is efficacious in lowering blood sugar levels because the plant contains 12.4% triticin essential oil, glycosides, saponins, alkaloids, tannins, flavonoids, and carbohydrates. Flavonoids, saponins and tannins are

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