

ABSTRAK

KERAGAMAN TUMBUHAN SUKU ARACEAE DI HUTAN LINDUNG BATUTEGI TANGGAMUS, PROVINSI LAMPUNG BERDASARKAN KARAKTER MORFOLOGI DAN MOLEKULER

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Indonesia memiliki iklim yang tropis karena dilewati jalur khatulistiwa sehingga keanekaragaman hayati di dalamnya beragam. Hutan Lindung Batutegi Tanggamus merupakan hutan hujan dataran rendah. Tumbuhan dengan vegetasi tropis diantaranya suku Araceae (talas-talasan) memiliki tingkat keragaman tinggi di Indonesia yaitu mencapai 25% (31 marga) dari jumlah yang pernah ditemukan di dunia. Keragaman dapat dianalisis menggunakan karakter morfologi dan molekuler. Tujuan penelitian ini yaitu mengetahui jenis-jenis tumbuhan suku Araceae menggunakan karakter morfologi dan molekuler dengan DNA barcoding di Hutan Lindung Batutegi Tanggamus, Provinsi Lampung serta mengetahui kemampuan gen penanda DNA *rbcL*, *ITS*, dan *matK* dalam mengidentifikasi tumbuhan suku Araceae. Penelitian dilaksanakan pada bulan Januari sampai Mei 2023. Pengambilan sampel dilakukan di Hutan Lindung Batutegi, Tanggamus dengan metode jelajah. Identifikasi secara morfologi melalui koleksi herbarium yang terdapat di Hebarium Bogoriense sedangkan identifikasi secara molekuler melalui DNA *barcoding* dengan tiga gen penanda meliputi *ribulose-1,5-bisfosfat karboksilase (rbcL)*, *maturase K (matK)*, dan *Internal Transcribed spacer (ITS)*. Hasil penelitian diperoleh 8 marga dengan 12 jenis tumbuhan suku Araceae. Marga *Homalomena* dan *Schismatoglottis* lebih banyak ditemukan. Terdapat 22 jenis kode sampel yang berhasil di ekstraksi menggunakan *Geneaid Genomic DNA Mini Kit*. Persentase tertinggi keberhasilan amplifikasi dimiliki oleh gen penanda *matK* yaitu 81,82% dan terendah dimiliki oleh gen penanda *rbcL* yaitu 31,81%. Gen penanda *matK* memiliki kemampuan lebih unggul dibandingkan *ITS* dan *rbcL* dibuktikan dengan keberhasilan amplifikasi dan pohon filogenetik yang lebih informatif.

Kata kunci : Araceae, Hutan Lindung Batutegi, Keragaman, Morfologi, Molekuler

ABSTRACT

DIVERSITY OF THE ARACEAE FAMILY IN THE BATUTEGI PROTECTION FOREST, TANGGAMUS, LAMPUNG PROVINCE BASED ON MORPHOLOGICAL AND MOLECULAR CHARACTERISTICS

By

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Indonesia has a tropical climate because it is passed by the equator so that the biodiversity in it is diverse. The Batutegi Protection Forest is a lowland rain forest. Plants with tropical vegetation, including the Araceae (taro) tribe, have a high level of diversity in Indonesia, reaching 25% (31 genera) of the number ever found in the world. Diversity can be analyzed using morphological and molecular characters. The purpose of this study was to identify plants belonging to the Araceae family using morphological and molecular characters with DNA barcoding in the Batutegi Tanggamus Protection Forest, Lampung and to determine the ability of DNA marker genes *rbcL*, *ITS*, and *matK* in identifying plants belonging to the Araceae family. The research was carried out from January to May 2023. Sampling was carried out in the Batutegi Protection Forest, Tanggamus using the roaming method. Morphological identification was through the herbarium collection in Hebarium Bogoriense, while molecular identification was through DNA barcoding with three marker genes, which included *ribulose-1,5-bisphosphate carboxylase (rbcL)*, *maturase K (matK)*, and *Internal Transcribed spacer (ITS)*. The results of the study obtained 8 genera with 12 species of plants belonging to the Araceae family. The genera *Homalomena* and *Schismatoglottis* are more common. There were 22 types of code samples that were successfully extracted using the Geneaid Genomic DNA Mini Kit. The highest percentage of amplification success was owned by the *matK* marker gene, which was 81.82%, and the lowest was owned by the *rbcL* marker gene, which was 31.81%. The *matK* marker gene has superior capabilities compared to *ITS* and *rbcL* as evidenced by the success of amplification and a more informative phylogenetic tree.

Keywords : Araceae, Batutegi Protection Forest, Diversity, Morphology, Molecular