

ABSTRAK

Zanuba Khusnalmuna. 24020122120009. **Karakterisasi dan Pengelompokan Aksesori Tanaman Daun Dewa (*Gynura divaricata* (L.) (DC.) di Pulau Jawa Berdasarkan Karakter Morfologi dan Penanda ISSR.** Dibawah bimbingan Lilih Khotimperwati dan Mentari Putri Pratami.

Tanaman daun dewa (*Gynura divaricata* (L.) DC.) merupakan tanaman yang berpotensi sebagai obat dan memiliki variasi karakter morfologi, namun informasi karakterisasi aksesori dan hubungan fenetik nya masih terbatas. Penelitian ini bertujuan mengarakterisasi aksesori tanaman daun dewa dari berbagai wilayah di Pulau Jawa serta menganalisis pola pengelompokan dan hubungan fenetiknya berdasarkan karakter morfologi dan marka ISSR. Penelitian dilaksanakan pada September 2025 hingga Januari 2026 menggunakan aksesori yang berasal dari Jakarta, Bogor, Bekasi, Tangerang, Sleman, Kediri, Nganjuk, Surabaya, dan Batu. Karakterisasi morfologi dilakukan terhadap 27 karakter vegetatif yang meliputi umbi, batang dan daun. DNA diisolasi menggunakan metode CTAB dan di amplifikasi dengan empat primer ISSR. Data morfologi dianalisis menggunakan *Principal Component Analysis* (PCA) dan *Unweighted Pair Group Method with Arithmetic Mean* (UPGMA), sedangkan data ISSR dan data gabungan dianalisis menggunakan metode UPGMA pada *software* MVSP versi 3.1. Hasil penelitian menunjukkan adanya variasi morfologi antaraksesori pada karakter umbi, batang, dan daun, dengan karakter umbi dan daun memberikan kontribusi terbesar terhadap variasi antaraksesori berdasarkan analisis PCA. Analisis ISSR menghasilkan 46 pita yang seluruhnya polimorfik (100%) dengan nilai PIC rata-rata 0,368, menunjukkan primer yang digunakan cukup informatif dalam mendeteksi variasi genetik. Analisis fenetik morfologi menunjukkan pasangan aksesori Kediri–Nganjuk dan Sleman–Tangerang memiliki kemiripan tertinggi, sedangkan analisis ISSR menunjukkan pasangan Bekasi–Tangerang paling mirip secara genetik. Analisis data gabungan menunjukkan aksesori Jakarta paling berbeda, sementara Bekasi–Tangerang tetap memiliki kemiripan tertinggi. Kombinasi karakter morfologi dan marka ISSR menghasilkan gambaran hubungan kemiripan antaraksesori yang lebih menyeluruh sehingga mendukung karakterisasi dan kajian fenetik tanaman daun dewa.

Kata kunci: *Gynura divaricata*, aksesori, karakterisasi morfologi, marka ISSR, hubungan fenetik.

ABSTRACT

Zanuba Khusnalmuna. 24020122120009. **Characterization and Grouping of Daun Dewa Accessions (*Gynura divaricata* (L.) (DC.) on Java Island Based on Morphological Characters and ISSR Markers.** Supervised by Lilih Khotimperwati and Mentari Putri Pratami.

Daun dewa (*Gynura divaricata* (L.) DC.) is a medicinally potential plant exhibiting morphological character variation; however, information on accession characterization and its phenetic relationships remains limited. This study aimed to characterize daun dewa accessions from various regions across Java Island and to analyze their grouping patterns and phenetic relationships based on morphological characters and ISSR markers. The research was conducted from September 2025 to January 2026 using accessions originating from Jakarta, Bogor, Bekasi, Tangerang, Sleman, Kediri, Nganjuk, Surabaya, and Batu. Morphological characterization was performed on 27 vegetative characters encompassing tubers, stems, and leaves. DNA was isolated using the CTAB method and amplified with four ISSR primers. Morphological data were analyzed using Principal Component Analysis (PCA) and Unweighted Pair Group Method with Arithmetic Mean (UPGMA), while ISSR and combined datasets were analyzed using UPGMA in MVSP software version 3.1. Results revealed morphological variation among accessions in tuber, stem, and leaf characters, with tuber and leaf characters contributing most substantially to inter-accession variation based on PCA. ISSR analysis generated 46 bands, all of which were fully polymorphic (100%), with a mean Polymorphic Information Content (PIC) value of 0.368, indicating that the primers were sufficiently informative for detecting genetic variation. Morphological phenetic analysis demonstrated that the Kediri–Nganjuk and Sleman–Tangerang accession pairs exhibited the highest similarity, whereas ISSR analysis revealed that the Bekasi–Tangerang pair was genetically most similar. Combined data analysis indicated that the Jakarta accession was the most divergent, while Bekasi–Tangerang retained the highest similarity. The integration of morphological characters and ISSR markers produced a more comprehensive representation of inter-accession relationships, thereby supporting accession characterization and phenetic studies of daun dewa.

Keywords: *Gynura divaricata*, accessions, morphological characterization, ISSR marker, phenetic relationships.