

**Keanekaragaman, Persebaran Lokal, dan Hubungan Kekerabatan Anggrek Epifit di Cagar Alam Gunung Sibela, Maluku Utara Berdasarkan Karakter Morfologis dan Anatomis**

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**INTISARI**

Kepulauan Maluku terletak di dekat garis Wallacea merupakan pusat pertemuan persebaran tumbuhan dari Asia dan Australia. Informasi keragaman jenis anggrek, distribusi lokal, karakter habitat dan pola hidup anggrek di Maluku masih sedikit. Penelitian ini bertujuan untuk melakukan studi keanekaragaman jenis anggrek epifit, persebaran lokal, dan hubungan kekerabatan antar spesies di Cagar Alam Gunung Sibela, Maluku Utara berdasarkan karakter morfologis dan anatomis. Dilakukan koleksi sampel dengan cara eksplorasi dan identifikasi menggunakan acuan deskripsi dan gambar *Orchid of Indonesia* dan *Orchid of Sulawesi*. Pembuatan preparat anatomi akar dan daun dilakukan dengan metode tanpa penyelubungan. Hubungan kekerabatan ditentukan menggunakan software *MVSP* dengan algoritma *UPGMA* melalui metode analisis *Simple Matching Coefficient*. Selanjutnya dilakukan analisis komponen utama menggunakan algoritma *Euclidian Biplots* yang digambarkan dalam bentuk *Scatter plot*. Hasil penelitian menunjukkan bahwa di Cagar Alam Gunung Sibela dijumpai 30 jenis anggrek epifit anggota subfamilia Epidendroideae yaitu *Aerides*, *Agrostophyllum*, *Bulbophyllum*, *Coelogyne*, *Dendrobium*, *Diplocaulobium*, *Eria*, *Flickingeria*, *Luisia*, *Phreatia*, *Pomatocalpa*, *Thelasis*, *Trichoglottis*, dan *Vandopsis*. Frekuensi anggrek epifit tertinggi adalah marga *Dendrobium* (44,59%). Persebaran jenis anggrek epifit tertinggi pada kisaran ketinggian 0-600 m. dpl. yang mencakup hutan pantai dan hutan hujan dataran rendah. Karakter anatomi pada akar dan daun memperkuat hubungan kekerabatan. Karakter anatomi yang berpotensi menjadi karakter pembeda spesies adalah jumlah lubang protoxilem, tipe sel stomata, kedudukan stomata, ukuran stomata dan trikoma. Kluster yang terbentuk pada dendrogram berkaitan dengan pemisahan tribus.

**Kata kunci :** anggrek epifit, Gunung Sibela, hubungan kekerabatan, morfologis, anatomis.

## Diversity, Local Distribution, and Similarity Relationships of Epiphytic Orchids in Sibela Mount Natural Reserve, North Moluccas Based on Morphological and Anatomical Characters

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### ABSTRACT

Moluccas islands located near the Wallace line is the area of the mixing distribution of plants from Asia and Australia. Information of orchid distribution which related to specific distribution, habitat, and growthform characters in Moluccas is still minimally. The objectives of this study are to study diversity of epiphytic orchid, local distribution, and similarity relationships among the species in Sibela Mount Natural Reserve, North Moluccas based on morphological and anatomical characters. The research was carried out by exploration and identification according to the sample description and picture of Orchid of Indonesia and Orchid of Sulawesi. Making preparation of root and leaf anatomy are conducted by non-embedding method. In constructing a dendrogram used MVSP software with UPGMA algorithm through *Simple Matching Coefficient* analytical method. Principal component analysis using the Euclidean Biplots algorithm presented in scatter plots. The result showed that 30 identified epiphytic species of orchids belong to 14 genera, there are *Aerides*, *Agrostophyllum*, *Bulbophyllum*, *Coelogyne*, *Dendrobium*, *Diplocaulobium*, *Eria*, *Flickingeria*, *Luisia*, *Phreatia*, *Pomatocalpa*, *Thelasis*, *Trichoglottis*, and *Vandopsis* which are genera is member of Epidendroideae subfamily. The genus with the highest frequency (44,59%) was *Dendrobium*. In terms of elevation, the highest distribution of the epiphytic orchids in coastal forest and lowland rain forest ecosystems at 0-600 m.asl. Anatomical characters of roots and leaves support similarity relationships. Stable characters as distinctive character of spesies were protoxylem pore, stomatal cells type, stomata position, the size of the stomata and the present of trichome. The cluster that was shaped on dendrogram connected with the tribe separation.

**Keywords** : epiphytic orchid, Sibela Mount Natural Reserve, similarity relationships, morphological, anatomical.