

**ABSTRACT**

Azzahra Putri Nur Fuadillah. 24020121130073. ***Systematics of Jujube (Ziziphus spp.) In The Sumatra Region Based on Morphological and Molecular Characteristics.*** Under the supervision of Dr. Dr. Lilih Khotimperwati, S.Si., M. Si., dan Dr. Lulut Dwi Sulistyaningsih, M.Si.

*Ziziphus spp. is a plant group with significant potential in the field of health and other beneficial uses, and it is widely distributed across the globe, including in Indonesia. Sumatra Island is known for its high biodiversity, which includes various species of Ziziphus. However, comprehensive information regarding the distribution and systematics of Ziziphus spp. in Sumatra remains limited and requires further investigation. This study aims to assess the phylogenetic relationships among Ziziphus species found in Sumatra using both morphological and molecular approaches. Herbarium specimens from Herbarium Bogoriense (BO) and living collections from the Bogor Botanical Garden were analyzed. Morphological data were processed using the UPGMA method, with similarity indices calculated via the Simple Matching Coefficient. Molecular analysis was conducted using DNA barcoding techniques with ITS and matK primers. Phylogenetic reconstruction was performed using the Neighbor-Joining and Maximum Likelihood methods in MEGA11. The results showed a general congruence between phenetic and phylogenetic analyses. Phenetically, Z. calophylla and Z. angustifolia clustered together; while Z. calophylla was distinct from Z. jujuba and Z. oenopolia. Phylogenetically, Z. calophylla was closely related to Z. oenopolia, while Z. angustifolia was grouped with Z. pubescens. Despite these findings, low bootstrap values suggest that additional and more diverse primers are needed to obtain more robust and accurate phylogenetic data.*

**Keywords:** DNA barcoding, identification, ITS, matK, relationship analysis, Sumatra, Ziziphus spp., Ziziphus spp. distribution.

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