ABSTRACT

Ahmad Muzaki Khoiruman, 24020122120044. Population Structure of *Nepenthes gymnamphora* Reinw. ex Nees on Mount Ungaran, Central Java, Department of Biology, Faculty of Science and Mathematics, Universitas Diponegoro. Under the supervision of Jumari and Anggiresti Kinasih.

Nepenthes gymnamphora Reinw. ex Nees is a protected plant in Indonesia under Ministry of Environment and Forestry, Republic of Indonesia Regulation No. P.20/MENLHK/SETJEN/KUM.1/6/2018 and categorized as Least Concern by the IUCN. It is distributed in Sumatra and Java, including the Ungaran Mountains, but information on its population and habitat remains limited. This study aimed to assess population structure, habitat characteristics, and relationships between environmental factors and population structure of *Nepenthes gymnamphora* on Mount Ungaran. Research was conducted along the Bondolan Peak to Botak Peak route using an exploratory method. Recorded data included coordinates, individual number, growth phase, sex, flowering status, pitcher color and presence, vegetation, soil nutrients, and abiotic factors. Data were analyzed descriptively; distribution pattern was analyzed using *Average Nearest Neighbor* (ANN), and relationships were analyzed using *Canonical Correspondence Analysis* (CCA). The study recorded 225 individuals, consisting of 7 seedlings, 2 juveniles, and 216 adults. Regeneration was low, with a juvenile-to-adult ratio of 0.009. Reproductive structure consisted of 68 males, 20 females, and 137 non-flowering individuals. Pitcher variation included 98 green, 108 spotted, 5 red, and 14 pitcherless individuals. The distribution pattern was clustered, with Rn 0.606. The habitat was an open savanna dominated by alang-alang, with high nutrients; however, the high C/N ratio indicated suboptimal nutrient availability. CCA showed that seedlings and juveniles were associated with soil moisture and wind, whereas the red variant was associated with light intensity. Conservation should focus on early growth phases, habitat protection, illegal collection prevention, and limiting trampling by hikers.

Keywords: *Pitcher Plant; Demography; Microhabitat; Edaphic; Spatial Analysis*