

Arief Dharma Putera Pratama, 2019, **Keanekaragaman Genetik Pada Populasi *Varanus salvator* (Laurenti, 1768) di Taman Nasional Alas Purwo**, Skripsi ini dibawah bimbingan Prof. Dr. Bambang Irawan, M. Sc. dan M. Hilman Fuadil Amin, S. Si., M. Si., Departemen Biologi, Fakultas Sains dan Teknologi, Universitas Airlangga.

ABSTRAK

Penelitian ini bertujuan untuk mengetahui variasi genetik *Varanus salvator*, pengelompokan populasi *Varanus salvator* di Taman Nasional Alas Purwo, dan hubungan jarak geografi dengan jarak genetik berdasarkan gen COI. Penelitian ini dilakukan di tiga lokasi Taman Nasional Alas Purwo, yaitu Pancur, Sadengan, dan Ngagelan. Isolasi DNA dari jaringan otot, *Polymerase Chain Reaction* (PCR), dan *sequencing* terhadap DNA *Varanus salvator*. Analisis data keanekaragaman genetik *Varanus salvator* menggunakan *software* MEGA. Analisis data pengelompokan populasi *Varanus salvator* di Taman Nasional Alas Purwo menggunakan *software* MEGA dan Arlequin. Analisis hubungan jarak geografi dengan jarak genetik menggunakan *software* GenAlEx. Hasil penelitian menunjukkan nilai keanekaragaman genetik *Varanus salvator* di Taman Nasional Alas Purwo sebesar 0,000. Hal tersebut menunjukkan bahwa tidak terdapat variasi genetik terhadap populasi *Varanus salvator* di Taman Nasional Alas Purwo. Pengelompokan *Varanus salvator* berdasarkan *Gen* COI menunjukkan bahwa *Varanus salvator* di Taman Nasional Alas Purwo terdiri dari satu kelompok yang sama. Nilai koefisien korelasi yang didapatkan dari hubungan antara jarak geografi dengan jarak genetik sebesar 0,680. Hal ini menunjukkan bahwa terdapat hubungan antara kedua variabel yang bersifat positif.

Kata Kunci: COI, Diversitas genetik, Taman Nasional Alas Purwo, *Varanus salvator*.

Arief Dharma Putera Pratama, 2019, **Genetic diversity in the population of *Varanus Salvator* (Laurenti, 1768) in Alas Purwo National Park**, Undergraduate research paper, supervised by Prof. Dr. Bambang Irawan, M. Sc. and M. Hilman Fuadil Amin, S. Si., M. Si., Departement of Biology, Faculty of Science and Technology, Airlangga University.

ABSTRACT

This study was conducted to determine the genetic variation of *Varanus salvator*, *Varanus salvator* population clustering in Alas Purwo National Park, and geographical distance connection with genetic distance based on the COI gene. The study was conducted in three locations of Alas Purwo National Park (Pancur, Sadengan, and Ngagelan). DNA isolation methods, polymerase Chain Reaction (PCR), and sequencing of DNA extracted from muscle tissue. COI sequences were analyzed using MEGA software to determine genetic diversity. Arlequin and MEGA also used to determine population clustreing. Relationship between geographical distance and genetic distance calculated by GenAlEx. The results showed the value of the genetic diversity of *Varanus Salvator* in Alas Purwo National Park at 0000. It indicated that there is no genetic variation on the population of *Varanus Salvator* in Alas Purwo National Park. The clustering analyzed of COI showed that *Varanus salvator* in Alas Purwo National Park is comprised of one equal group. The value of the correlation coefficient obtained from the relationship between geographic distance and a genetic distance of 0680. This indicated that there is a relationship between the two variables that are positive.

Keywords : Alas Purwo National Park COI, Genetic Divergence, , *Varanus salvator*.