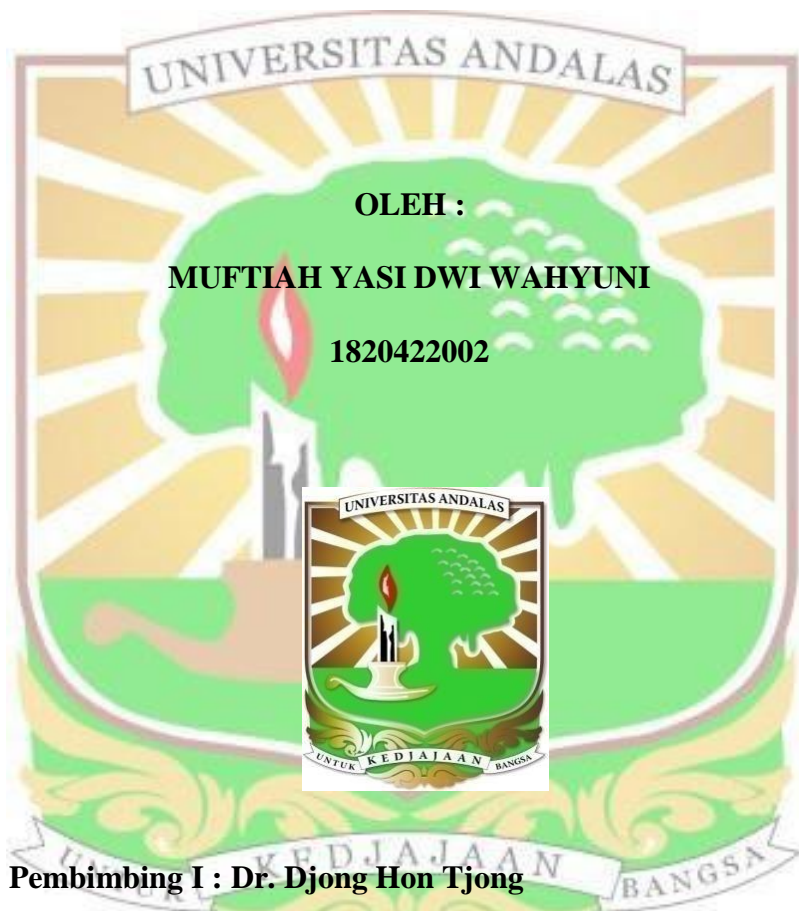


**ANALISIS VARIASI GENETIK *Fejervarya cancrivora* (Gravenhorst, 1829)
(Anura : Dicroglossidae) DI SUMATERA BARAT BERDASARKAN GEN
SITOKROM OKSIDASE SUBUNIT I (COI)**

TESIS



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ABSTRAK

Variasi genetik pada suatu spesies dipengaruhi oleh *random mating*, perpindahan suatu individu ke populasi lain (migrasi), mutasi dan isolasi geografis. Bukit Barisan di Sumatera Barat merupakan salah satu *barrier* ekologi yang dapat berpengaruh besar pada suatu spesies, termasuk amfibi. Penelitian ini bertujuan untuk menganalisis variasi genetik *F. cancrivora* yang merupakan salah satu spesies amfibi dengan distribusi luas di area persawahan di Sumatera Barat berdasarkan gen sitokrom oksidase subunit I (*COI*). Penelitian ini menggunakan sampel jaringan hati dari *F. cancrivora* yang berasal dari enam lokasi di Sumatera Barat yang mewaliki sisi barat dan timur dari Bukit Barisan. Hasil penelitian menunjukkan bahwa *F. cancrivora* di Sumatera Barat tidak bervariasi secara genetik berdasarkan gen *COI* dan memiliki satu tipe *haplotype* (H₁). *Nucleotide diversity* yang bernilai nol menandakan bahwa sekuen gen *COI* *F. cancrivora* di Sumatera Barat tidak memiliki perbedaan basa nukleotida. Hal ini disebabkan oleh aliran gen yang besar yang terjadi karena interaksi antar populasi *F. cancrivora* di Sumatera Barat sebelum Bukit Barisan terbentuk dan dapat dinyatakan bahwa populasi *F. cancrivora* di Sumatera Barat merupakan satu populasi yang sama sebelumnya. Berdasarkan hasil penelitian tersebut, dapat dinyatakan bahwa Bukit Barisan tidak mempengaruhi variasi genetik *F. cancrivora* di Sumatera Barat berdasarkan gen *COI*.

Kata kunci : *Barrier*, Bukit Barisan, *COI*, *F. cancrivora*, *gene flow*



ABSTRACT

Genetic variation in a species is influenced by random mating, movement of an individual to another population (migration), mutation, and geographic isolation. The Barisan mountain in West Sumatra is one of the natural barriers that can have a major effect on a species, including amphibians. This study aims to analyze the genetic variation of *F. cancrivora* which is a species of an amphibian with a wide distribution in rice fields in West Sumatra based on the cytochrome oxidase subunit I (COI) gene. This study used liver tissue samples of *F. cancrivora* from six locations in West Sumatra which represent the west and east sides of Barisan mountain. The results showed that *F. cancrivora* in West Sumatra did not vary genetically based on COI gene and had one haplotype type (H₁). Nucleotide diversity which is zero indicates that the COI gene sequence of *F. cancrivora* in West Sumatra does not have a difference in nucleotide bases. It is caused by a large gene flow that occurs due to the interaction between populations *F. cancrivora* in West Sumatra before Barisan mountains formed and it can be stated that the population of *F. cancrivora* in West Sumatra is the same before. Based on these results, it can be stated that Bukit Barisan does not affect the genetic variation of *F. cancrivora* in West Sumatra. We conclude that Barisan mountains do not affect the genetic variation of *F. cancrivora* in West Sumatra based on the COI gene.

Keyword : Barrier, Barisan mountain, COI, F. cancrivora, gene flow

