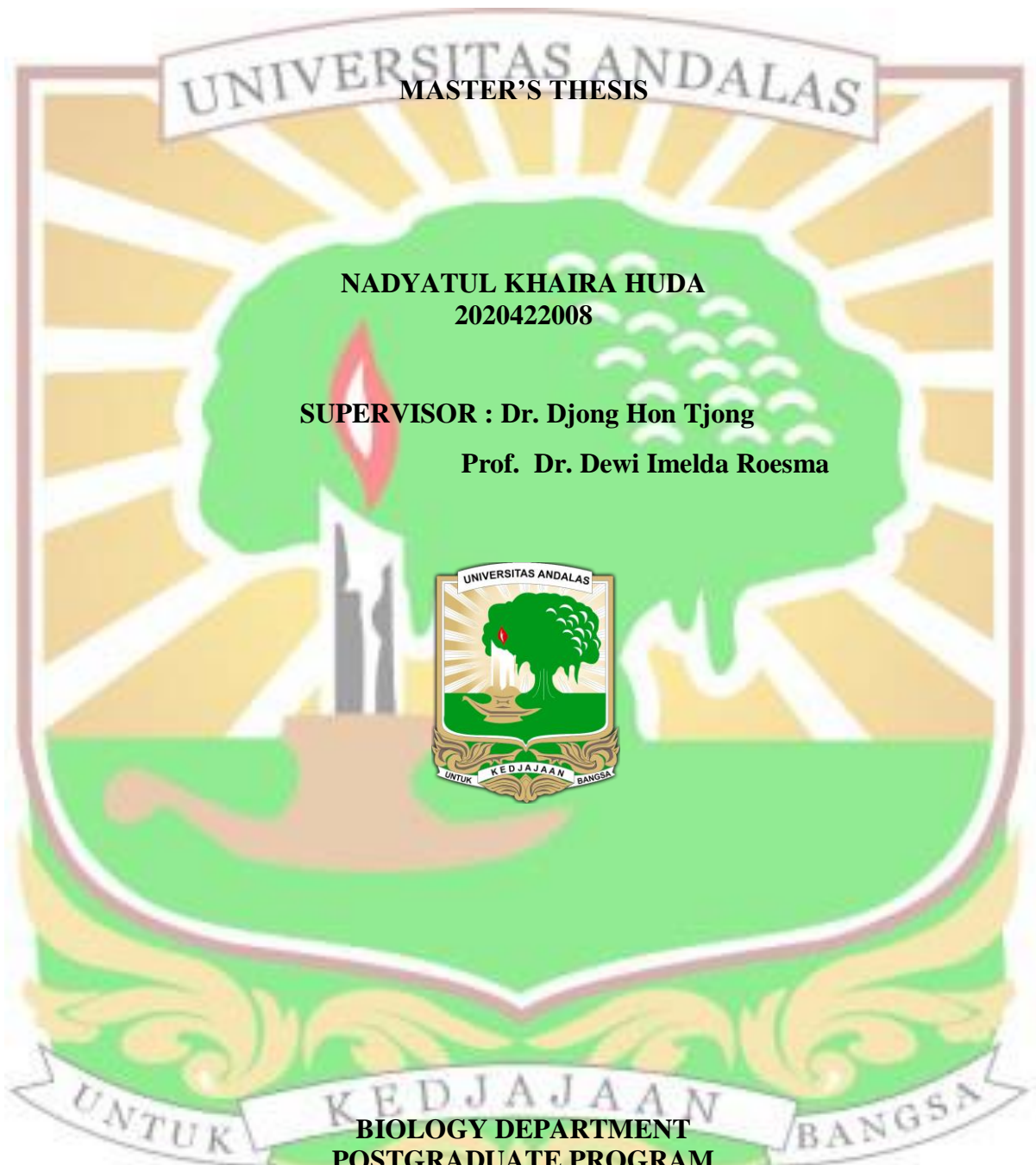


GENETIC VARIATION ANALYSIS OF *Fejervarya cancrivora* (GRAVENHORST, 1892) (Anura: Dicroglossidae) IN WEST SUMATRA BASED ON MORPHOLOGY AND RAPD (RANDOM AMPLIFIED POLYMORPHIC DNA)



MASTER'S THESIS

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ABSTRAK

Bukit Barisan sebagai barrier ekologi yang dapat membatasi migrasi dan aliran gen khususnya amfibi. Penelitian ini bertujuan untuk melacak variasi morfologi *Fejervarya cancrivora* di Sumatra Barat berdasarkan morfometrik. Total 120 individu *F. cancrivora* dari enam populasi meliputi Padang, Pariaman dan Pesisir Selatan sebagai bagian barat Bukit Barisan. Pasaman, Limapuluh Kota dan Sijunjung sebagai bagian timur Bukit Barisan. Hasil analisis data morfometrik didapatkan 13 karakter yang bervariasi pada individu-individu jantan yaitu SL, EN, TEL, MN, HAL, FAL, HLL, THIGHL, TL, FOL, TFOL, 3FL and 1FL. dan 16 karakter bervariasi pada individu-individu betina yaitu SVL, HL, MSL, NS, SL, TEL, MN, MFE, IN, IOD, FAL, THIGHL, FOL, 4TL, IMTL and 1 TL. Berdasarkan hasil analisis PCA menunjukkan keenam plot saling tumpang tindih. Dapat disimpulkan bahwa meskipun terdapat karakter yang bervariasi, tidak ada perbedaan secara signifikan yang memisahkan satu populasi dengan populasi lainnya. Berdasarkan penanda RAPD, didapatkan hasil nilai gene flow yang tinggi ($N_m = 2,285$). Kesimpulannya, baik secara morfologi maupun genetik tidak terdapat perbedaan yang signifikan antara keenam populasi *F. cancrivora* di Sumatra Barat.

Keywords: *Fejervarya cancrivora*, Morfometrik, RAPD, Sumatra Barat, Variasi.



ABSTRACT

Bukit Barisan known as great ecological barrier that could affect migration and gene flow especially for amphibians. The present study was conducted to tracing variation of *Fejervarya cancrivora* in West Sumatra using Morphometric analysis and RAPD marker. We used total of 120 frogs of *F. cancrivora* for morphometric measurement and 60 frogs to for tracing genetic variation. We collected frogs from six area including Padang, Pariaman and Pesisir selatan presented western part of Bukit Barisan, while Pasaman, Limapuluh Kota and Sijunjung presented eastern part of Bukit Barisan. Morphometric analysis shown that there are 13 characters have variation in male population including SL, EN, TEL, MN, HAL, FAL, HLL, THIGHL, TL, FOL, TFOL, 3FL and 1FL. While 16 characters have variation in female population including SVL, HL, MSL, NS, SL, TEL, MN, MFE, IN, IOD, FAL, THIGHL, FOL, 4TL, IMTL and 1 TL. PCA analyses on morphology characters showing overlapping scatter plot among 6 area. Based on RAPD marker, shown high gene flow of *F. cancrivora* in west sumatra, $N_m = 2.285$ As the conclusion, there is no significant difference among 6 population based on morphometric and RAPD marker.

Keywords: Variation, *Fejervarya cancrivora*, Morphometric, RAPD, West Sumatra



