

**MORPHOLOGY ANALYSIS ON *Ichthyophis* cf.
sumatranus (AMPHIBIAN, GYMNOPTERA,
ICHTHYOPHIIDAE) IN WEST SUMATRA**

BIOLOGY UNDERGRADUATE THESIS

By :

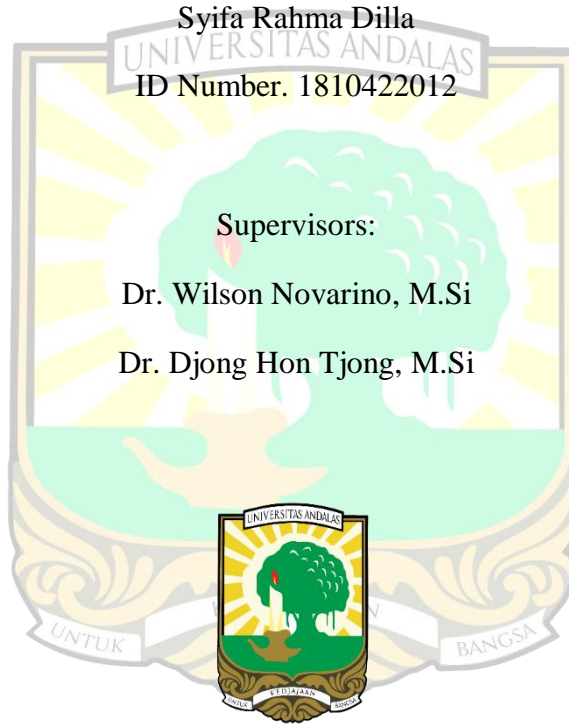
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**BIOLOGY DEPARTMENT
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNIVERSITAS ANDALAS
PADANG
2022**

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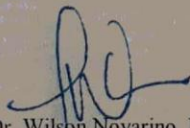
Presented for completing requirements for obtaining a Bachelor of Science degree
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Syifa Rahma Dilla
ID Number. 1810422012

Padang, July 29th 2022

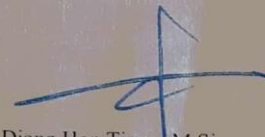
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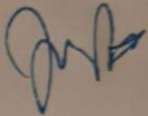
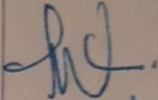
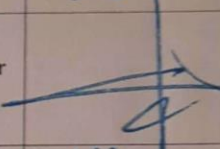
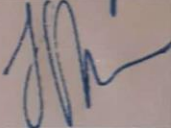

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This undergraduate thesis has been defended in front of committees of bachelor's degree examination of Biology Department, Faculty of Mathematics and Natural Sciences, Andalas University. On Friday, July 29th 2022

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3.	Dr. Djong Hon Tjong, M.Si	Member	
4.	Dr. Henny Herwina	Member	
5.	Prof. Dr. Dahelmi	Member	

STATEMENT OF AUTHENTICITY

Here I hereby declare that :

My undergraduate thesis are original and has never been submitted for a bachelor degree at either Universitas Andalas or other colleges. This thesis is purely the idea of my own formulation and research without any other assistance except the supervisors. In this undergraduate thesis, there are no works or opinions that have been written or published by others except they are clearly stated in the bibliography.

I made this statement in fact, and if in the future there are deviations and untruths, then I'm willing to accept the academic sanction in accordance with the applicable rules.

Padang, July 29th 2022



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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

This undergraduate thesis is dedicated to my beloved parents, Ibu (Erma Suwasni) and Ayah (Alm. Ahmad Pono Ameh), Icit (Rita Siswiya). My little brothers Habibullah Rahmadi and Irzam Rahmadi, who gives strength in every step of my life, and thanks to myself for not giving up and persisting even though it's not easy and finishing everything well.

-Syifa Rahma Dilla, S.Si-

PREFACE

Praise and grateful to Allah SWT for all the grace, guidance, and that the author was given the opportunity to be able to complete the undergraduate thesis with the title **Morphology Analysis on *Ichthyophis cf. sumatranus* (Amphibian, Gymnophiona, Ichthyophiidae) in West Sumatra**, as one of the requirements for obtaining a Bachelor of Science degree majoring in Biology, Faculty of Mathematics and Natural Sciences, Andalas University, Padang.

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7. All of my best friend that always helping in every hard moment.
8. All of the FALCON'18 members for support on every situation.
9. All parties involved in writing this undergraduate thesis, that can't spill one by one.

Author's hope this undergraduate thesis can be useful for all, and may God bless us always.

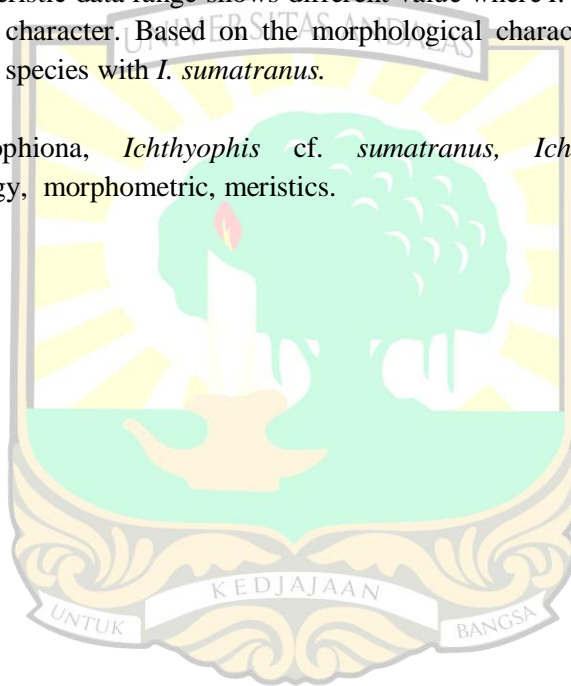
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ABSTRACT

The Gymnophiona order is the least known order in the amphibians class, study is necessary to complete the data on the order. Research has been conducted from May 2021 until May 2022, on South Solok and Solok regency for sample collection and Zoology Museum of Biology Department, Andalas University, for final preservation, measurement, and data analysis. The aim of this research are for confirming taxonomic status by morphological characters of *Ichthyophis* cf. *sumatranus* that were reported distributed on West Sumatra, and compared with *Ichthyophis sumatranus* data from Bengkulu province. Analyzed that has been carried out with Mann-Whitney U test, shows that three of six morphometric characters are significantly different based on the p value. Principal component analysis (PCA) conducted on PAST statistics program shown *I. cf. sumatranus* and *I. sumatranus* in different clusters. All of the meristic data range shows different value where *I. sumatranus* less than *I. sumatranus* on each character. Based on the morphological characters, *I. cf. sumatranus* indicate as a different species with *I. sumatranus*.

Keywords: Gymnophiona, *Ichthyophis* cf. *sumatranus*, *Ichthyophis sumatranus*, morphology, morphometric, meristics.



ABSTRAK

Ordo Gymnophiona merupakan ordo yang paling sedikit diketahui pada kelas amfibi, dan membutuhkan penelitian untuk lebih mengetahui kelas ini. Penelitian ini dilaksanakan dari Mei 2021 sampai Mei 2022, di Kabupaten Solok Selatan dan Solok untuk pengambilan sampel dan Museum Zoologi Jurusan Biologi, Universitas Andalas, untuk pengawetan akhir, pengukuran, dan analisis data. Penelitian ini bertujuan untuk mengkonfirmasi status taksonomi berdasarkan karakter morfologi *Ichthyophis cf. sumatranus* yang dilaporkan tersebar di Sumatera Barat, dan dibandingkan dengan data *Ichthyophis sumatranus* dari Provinsi Bengkulu. Analisis yang telah dilakukan dengan uji Mann-Whitney U test, menunjukkan bahwa tiga dari enam karakter morfometrik berbeda nyata berdasarkan nilai *p*. Analisis komponen utama (PCA) yang dilakukan pada program PAST statistik menunjukkan *I. cf. sumatranus* dan *I. sumatranus* dalam klaster yang berbeda. Semua rentang data meristik menunjukkan nilai yang berbeda dimana *I. cf. sumatranus* lebih kecil dari *I. sumatranus* pada setiap karakter. Berdasarkan karakter morfologi, *I. cf. sumatranus* diduga sebagai spesies yang berbeda dengan *I. sumatranus*.

Kata kunci: Gymnophiona, *Ichthyophis cf. sumatranus*, *Ichthyophis sumatranus*, morfologi, morfometrik, meristik.

