

ABSTRAK

Chindy Charolin Manalu, NIM 4213220023 (2021). Studi Keanekaragaman dan Kelimpahan Ikan di Danau Toba Kecamatan Balige Kabupaten Toba.

Penelitian ini bertujuan untuk mengetahui keanekaragaman ikan, kelimpahan ikan dan faktor fisika – kimia perairan Danau Toba Kecamatan Balige, di tiga stasiun penelitian yang berbeda yaitu stasiun 1 Pelabuhan Mulia Raja Napitupulu Balige, stasiun 2 Tambunan Sunset *Beach*, dan stasiun 3 Desa Lumban Pea. Metode pengambilan sampel dilakukan dengan *Purposive Sampling* menggunakan bubu, dan serok dengan tiga kali pengulangan. Parameter yang diamati meliputi indeks keanekaragaman, kelimpahan, keseragaman, dominansi. Parameter fisika yang diamati meliputi suhu, intensitas cahaya, kecerahan, dan kecepatan arus. Parameter kimia yang diamati meliputi derajat keasaman (pH), oksigen terlarut (DO), dan kebutuhan oksigen biokimia (BOD). Hasil penelitian menunjukkan bahwa terdapat sembilan spesies ikan yang tertangkap, dengan *Amphilophus labiatus* menjadi spesies yang paling melimpah dan mendominasi. Indeks keanekaragaman stasiun 1 $H' = 1.77$, stasiun 2 $H' = 1.76$, dan stasiun 3 $H' = 2.01$ tergolong kategori sedang. Indeks kelimpahan tertinggi yaitu spesies Red Devil *Amphilophus labiatus* dengan rata – rata 28.26% tergolong kategori sedang. Indeks keseragaman di tiga stasiun penelitian yaitu $E = 0.81 - 0.91$ dengan kategori tinggi. Indeks dominansi di stasiun 3 memiliki nilai yang paling tinggi di antara stasiun 1 dan 2 dengan nilai $C = 0.71$ tergolong kategori sedang. Hasil pengukuran suhu yaitu $25^{\circ}\text{C} - 28.5^{\circ}\text{C}$, intensitas cahaya yaitu 1275 - 1686 Lux, kecerahan yaitu 5,3 - 6,5 M, dan kecepatan arus yaitu 0,20 - 0,40 m/s. Keadaan faktor kimia di kawasan perairan Danau Toba Kecamatan Balige, Hasil pengukuran derajat keasaman pada 3 stasiun penelitian adalah sama yaitu 7, DO yaitu 6,4 - 7,2 mg/L, dan BOD yaitu 4,6 - 6,7 mg/L

Kata Kunci : Keanekaragaman, Kelimpahan, Parameter Fisika-Kimia

ABSTRACT

Chindy Charolin Manalu, Student ID Number 4213220023 (2021). Study of Fish Diversity and Abundance in Lake Toba, Balige District, Toba Regency

This study aims to determine the diversity and abundance of fish and the physical and chemical factors of Lake Toba in Balige District at three different research stations, namely Station 1 at Mulia Raja Napitupulu Balige Port, Station 2 at Tambunan Sunset Beach, and Station 3 at Lumban Pea Village. Sampling was conducted using purposive sampling with a net and a scoop, repeated three times. The parameters observed included diversity index, abundance, evenness, and dominance. The physical parameters observed included temperature, light intensity, brightness, and current velocity. The chemical parameters observed included pH, dissolved oxygen (DO), and biochemical oxygen demand (BOD). The results of the study showed that nine fish species were caught, with *Amphilophus labiatus* being the most abundant and dominant species. The diversity index at station 1 was $H' = 1.77$, station 2 was $H' = 1.76$, and station 3 was $H' = 2.01$, all classified as moderate. The highest abundance index was for the Red Devil *Amphilophus labiatus* species, with an average of 28.26%, also classified as moderate. The evenness index at the three research stations was $E = 0.81-0.91$, classified as high. The dominance index at Station 3 had the highest value among Stations 1 and 2, with $C = 0.71$, classified as moderate. The temperature measurement results were 25°C-28.5°C, light intensity was 1275-1686 Lux, brightness was 5.3-6.5 M, and current velocity was 0.20-0.40 m/s. The chemical factors in the waters of Lake Toba, Balige District, were as follows: the pH measurements at the three research stations were the same, at 7; DO was 6.4-7.2 mg/L; and BOD was 4.6-6.7 mg/L.

Keywords: Diversity, Abundance, Physical-Chemical Parameters

