

KARAKTERISTIK HABITAT BIOFISIK DANAU LEDULU UNTUK PELEPASLIARAN KURA-KURA LEHER ULAR ROTE (*Chelodina mccordi*)

INTISARI

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Kura-kura leher ular rote (*Chelodina mccordi*) merupakan satwa endemik Indonesia yang terancam dan dilindungi. Dalam upaya konservasinya, penangkaran dilakukan untuk melestarikan populasi *C. mccordi* yang sudah tidak ditemukan di alam liar dengan menyiapkan upaya repatriasi dan reintroduksi pada alam liar. Danau Ledulu ditetapkan sebagai salah satu danau dalam Kawasan Ekosistem Esensial Lahan Basah Nusa Tenggara Timur yang berpotensi menjadi habitat pelepasliaran bagi *C. mccordi*. Oleh karena itu, penelitian ini bertujuan untuk mengidentifikasi karakteristik biofisik habitat Danau Ledulu dan menganalisis kelayakan habitatnya untuk pelepasliaran *C. mccordi* pada masa mendatang. Penelitian dilakukan pada bulan Desember 2022 dengan penempatan plot secara *purposive* pada tengah perairan terbuka dan kecil, di bawah vegetasi, dan pada lokasi peletakkan kandang *C. mccordi* untuk aspek air. Pada aspek pakan, pengamatan dilakukan pada perairan terbuka kecil. Habitat terestrial sempadan danau diamati pada aspek pelindung, sedangkan habitat akuatik juga diamati pada aspek ruang, dengan jarak antar titik sejauh 100 meter. Hasil pengambilan data kemudian dianalisis deskriptif dan selanjutnya dianalisis menggunakan *gap analysis* terhadap kriteria kelayakan habitat *C. mccordi*. Hasil penelitian menunjukkan kualitas air dengan suhu 27.38°C – 30.23°C, pH 7.42, salinitas 0.31 ppt, konduktivitas 628.75 µS/cm, serta jumlah zat padat terlarut 435.22 mg/L. Potensi pakan yang diperoleh berupa ikan betok, lele, dan mujair. Pada aspek ruang, ketinggian tempat berkisar antara 9 – 22 mdpl, intensitas cahaya matahari 9639.25 lux, suhu ruang 26.81°C – 32.50°C dan kelembaban 58.89% – 82.28%. Kerapatan vegetasi 4090.91 ind/ha pada semai, 400 ind/ha pada sapihan, 472.73 ind/ha, dan kerapatan 165.91 ind/ha pada pohon. Pada aspek pelindung, diperoleh 30 – 45% tutupan tumbuhan bawah dan substrat dominan berupa seresah. Berdasarkan hasil *gap analysis*, walau hampir seluruh variabel habitat dinyatakan layak, Danau Ledulu dinilai masih kurang layak menjadi habitat *C. mccordi* dikarenakan kedua variabel kunci yaitu estimasi ketersediaan pakan yang kurang mendukung kebutuhan pakan *C. mccordi* dalam jangka panjang dan *home range* berupa luasan danau terbuka sangat terbatas dengan hambatan vegetasi rapat di sekelilingnya yang masih membutuhkan pertimbangan pengelolaan lebih lanjut.

Kata Kunci: *C. mccordi*, Danau Ledulu, air, pakan, pelindung, ruang

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HABITAT CHARACTERISTICS STUDY IN LAKE LEDULU FOR THE SOFT RELEASE OF ROTE ISLAND SNAKE NECKED TURTLE (*Chelodina mccordi*)

ABSTRACT

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The rote snake-necked turtle (*Chelodina mccordi*) is a threatened and protected endemic species of Indonesia. In its conservation efforts, captive breeding is carried out to preserve *C. mccordi* populations that are no longer found in the wild by preparing repatriation and reintroduction efforts in the wild. Lake Ledulu is designated as one of the lakes in the East Nusa Tenggara Wetland Essential Ecosystem Area that has the potential to become a released habitat for *C. mccordi*. Therefore, this study aims to identify the biophysical characteristics of the Lake Ledulu habitat and analyze the feasibility of its habitat for the future release of *C. mccordi*. The study was conducted in December 2022 with purposive placement of plots in the middle of open and small waters, under vegetation, and at the location of the *C. mccordi* cage for the water aspect. In terms of forage aspect, observations were made in small open waters. Lake border terrestrial habitat was observed in the cover aspect, while aquatic habitat was also observed in the space aspect, with a distance of 100 meters between points. The results of data collection were then analyzed descriptively and further analyzed using gap analysis of *C. mccordi* habitat eligibility criteria. Research results showed water quality with a temperature of 27.38°C - 30.23°C, pH 7.42, salinity 0.31 ppt, conductivity 628.75 µS/cm, and total dissolved solids 435.22 mg/L. The potential food for *C. mccordi* obtained was mudskipper fish, catfish, and tilapia. In terms of space, the altitude ranged from 9 - 22 meters above sea level, sunlight intensity was 9639.25 lux, room temperature was 26.81°C - 32.50°C and room humidity was 58.89% - 82.28%. Vegetation density measured 4090.91 individuals/ha in seedlings, 400 individuals/ha in saplings, 472.73 individuals/ha in pole, and 165.91 individuals/ha density in trees. On the cover aspect, 30 - 45% understory cover was obtained and the dominant substrate was leaf litter. Based on the results of the gap analysis, although almost all habitat variables are declared feasible, Ledulu Lake is still considered less feasible as a habitat for *C. mccordi* due to the two key variables, namely the estimated availability of food that are less supportive for the forage needs of *C. mccordi* in the long term and the home range in the form of a very limited open lake area with dense vegetation barriers around it that still require further management considerations.

Keywords: *C. mccordi*, Lake Ledulu, water, forage, cover, space

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