



## INTISARI

Penelitian ini bertujuan untuk mengidentifikasi ikan cichlid di Waduk Sermo Yogyakarta secara morfometrik dan molekuler, serta mengetahui hubungan kekerabatannya. Hasil tangkapan nelayan selama bulan November 2016-September 2017 diambil sebanyak 480 ekor sebagai sampel. Sampel ikan dikelompokkan berdasarkan morfologi, yaitu *red devil* merah, *red devil* hitam, *red devil* merah kehitaman, nila hitam, mujair dan managuin, kemudian dikelompokkan berdasarkan jenis kelaminnya. Pada setiap contoh ikan diukur karakter morfometrik sebanyak 21 unit. Contoh DNA diambil pada jaringan insang dari dua ekor ikan pada setiap kelompok dan jenis kelamin. Data karakter morfometrik dianalisis pembedanya, sedangkan DNA dianalisis dengan BLAST (*Basic Local Alignment Search Tools*) dari NCBI. Hasil Uji T terhadap karakter morfometrik jantan dan betina pada tiap kelompok ikan menunjukkan fenomena dimorfisme seksual. Hasil analisis komponen utama dan fungsi diskriminan mengelompokkan keenam kelompok ikan cichlid ke dalam tiga kelompok besar yakni kelompok *red devil*, nila hitam dan mujair, serta managuin. Karakter pembeda utama antar ikan cichlid adalah *pelvic fin-anal spine* (PSAS) dan *premaxilla-anal spine* (PMAS). Hasil dendogram mengklasifikasikan keenam kelompok cichlid ke dalam tiga kelompok besar. Hasil *sequencing* mitokondria DNA *control region* menunjukkan seluruh kelompok ikan *red devil* memiliki kemiripan dengan *Amphilophus amarillo*, ikan nila.dengan *Oreochromis niloticus*, ikan mujair dengan *O. mossambicus*, dan ikan managuin dengan *Parachromis managuensis*.

Kata kunci: Cichlid, dimorfisme seksual, mtDNA CR, Waduk Sermo



## ABSTRACT

The purpose of this study was to identify the cichlid fishes in Sermo Reservoir Yogyakarta based on morphometric and molecular characters and to know their kinship relationship. The catch of fishermen during November 2016-September 2017 was collected as much as 480 individuals as samples. The fish samples were grouped based on morphology, that is red devil red, red devil black, red devil reddish black, black nile tilapia, mujair, and managuin, and then were grouped based on the sex. The morphometric character data of 21 units were measured in each sample. The DNA samples were taken from the gill tissue on each sex in each species of two individuals. The morphometric character data was analyzed for discriminant distance, while DNA was analyzed by BLAST from NCBI. The T-test on male and female morphometric characters in each fish group showed sexual dimorphism phenomenon. The result of principal component and discriminant function analysis grouped the six cichlid groups into three major groups namely the red devil, the black nile tilapia and the mujair, and the managuin group. The main distinguish characters among the cichlid fish were *pelvic fin-anal spine* and *premaxilla-anal spine*. The dendrogram of kinship relationship classified the six cichlid groups into three major groups. The mitochondrial DNA sequencing encoding control region gene showed that among red devil group has the highest similarity with *Amphilophus amarillo*, black nile tilapia with *Oreochromis niloticus*, mujair with *O. mossambicus*, and managuin with *Parachromis managuensis*.

Keywords: Cichlid, mtDNA CR, Sermo Reservoir, sexual dimorphism