



## INTISARI

### ***SEXING BURUNG LOVEBIRD FISCHER (*Agapornis fischeri*) SECARA FENOTIP DAN GENOTIP***

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*Lovebird* kepala emas (*Agapornis fischeri*) merupakan burung yang banyak diminati karena keindahan bulu dan kicauannya. Penentuan jenis kelamin *lovebird* biasanya baru dilakukan pada umur empat bulan dengan metode fenotip. Penelitian ini bertujuan menentukan jenis kelamin secara genotip dan fenotip pada anakan *lovebird*. Penelitian ini menggunakan 12 ekor burung *lovebird* umur 30 hari. Semua burung diambil sampel bulu dan *swab buccal* untuk *sexing* secara genotip dengan metode *polymerase chain reaction* (PCR) untuk amplifikasi gen CHD1 menggunakan pasangan primer CHD1F/CHD1R. Hasil visualisasi PCR sampel bulu dan *swab buccal* didapatkan sebanyak 6 ekor diidentifikasi sebagai burung jantan yang menghasilkan satu *band* ( $\pm 500$  bp), dan 6 ekor diidentifikasi sebagai burung betina yang menghasilkan dua *band* ( $\pm 500$  bp dan  $\pm 300$  bp). Berdasar hasil genotip, burung dikelompokkan menjadi 6 ekor betina dan 6 ekor jantan. Semua burung diamati secara fenotip meliputi lebar *os pubis*, panjang *vent*, berat badan, dan garis mata pada umur 30, 45 dan 60. Hasil pengamatan fenotip lebar *os pubis*, panjang *vent*, dan berat badan kelompok betina dan jantan dibandingkan menggunakan uji *independent T-test* untuk data dengan persebaran normal dan uji *Mann whitney* apabila persebaran tidak normal. Hasil pengamatan fenotip didapatkan bahwa *sexing lovebird* pada umur 60 hari jantan garis mata di atas garis paruh sedangkan betina garis mata sejajar garis paruh. Hasil analisis statistik lebar *os pubis* dan panjang *vent* burung betina berbeda nyata dengan burung jantan pada umur 60 hari ( $p < 0.05$ ). Disimpulkan bahwa *sexing lovebird* dapat dilakukan secara genotip pada umur 30 hari dan fenotip berdasar garis mata dan paruh, lebar *os pubis* dan panjang *vent* pada umur 60 hari.

Kata Kunci: CHD1, fenotip, genotip, *lovebird*



## ABSTRACT

### **PHENOTYPIC AND GENOTYPIC SEXING ON FISCHER'S LOVEBIRD (*Agapornis fischeri*)**

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Lovebird fischer (*Agapornis fischeri*) has tremendously gained popularity for its charming colors and playful chirp. The most common phenotype method for determining Lovebird's gender can only be done at 4 months old. This study aim to determine Lovebird's gender with genotypic and phenotype method in Lovebird chicks. This study used 12 individuals at 30 days age. Samples of feathers and buccal swabs were taken from the 30-day-old lovebirds for genotypic sexing using the polymerase chain reaction (PCR) method to amplify the CHD1 gene using the CHD1F/CHD1R primer pair. Visualization from PCR samples feather and swab buccal found that 6 individuals were identified as male birds which produced one band ( $\pm 500$  bp), and 6 individuals were identified as female birds which produced two bands ( $\pm 500$  bp and  $\pm 300$  bp). Based on the genotypic results, they were assigned as 6 females and 6 males. Phenotypic observations as *os pubic* and vent width, body weight, also the line between both eyes were then evaluated from all lovebirds on day 30, 45, and 60. The results of phenotypic observations of the width of the pubis, vent length, and body weight of the female and male groups were compared and analyzed using an Independent T-test for normal data distribution and the Mann Whitney test if there's any non-normal distribution. Phenotype observations showed that male lovebirds at 60 days old have an eye stripe above the beak line, whereas female lovebirds have an eye stripe parallel to the beak line. Statistical analysis of the *os pubic* and vent width can be conducted on lovebirds starting from 60 days old ( $p < 0.05$ ). Determination of lovebird's gender can be done by genotype at the age of 30 days and phenotype from the line between both eyes, as well as the *os pubic* and vent width at 60 days old.

Keywords: CHD1, genotype, *Lovebird*, phenotype