

## Summary

**Nur Anisa.** “Identification of *Amidostomum* sp. in Gizzard of Muscovy Duck (*Cairina moschata*) in Nganjuk Sub-District Using Scanning Electron Microscopy (SEM)” (under the counsel of Dr. E. Djoko Poetranto, drh., MS. as primary supervisor and Retno Sri Wahyuni, drh., MS. as secondary supervisor).

Muscovy ducks like other poultry and waterfowl, have omnivorous eating habits, that's induced parasite infestation. Despite their abundance and widespread geographical distribution, native and naturalized muscovy ducks have been little studied. However parasitic infections are the major factors responsible for economic losses through reduction in productivity and increased mortality.

*Amidostomum* sp. has been recorded as nematode parasites which burrowing under the horny lining of the gizzard in waterfowl (duck, geese and swan). Infection in young birds is lethal through some signs like difficulty in swallowing and obstruction of the gizzard. Seventeen species were identified as group in *Amidostomum* genus and only some species which commonly reported in worldwide such as *A. acutum*, *A. anseris*, and *A. henry*.

This research was conducted to identify *Amidostomum* sp. in gizzard of Muscovy duck in Nganjuk sub-district, a total of 42 birds were collected from traditional market in Nganjuk from the beginning of March till the early of July 2019. The worms obtained were preserved in 2% glutaraldehyde and delivered to the Unair-Medicine Faculty for drying and coating process. After that sample was taken to ITS-Mechanical Engineering for processing SEM. Additional process

include Semichon's acetic carmine staining and observation using light microscopy and camera lucida microscopy.

Result Examination of the gizzard revealed the infection of six birds (14.28%) with the one species of parasites (*Amidostomum sp.*). There are no gross pathological presence during the examination in the gizzard organs due to parasite such as obstruction, haemorrhage and large nodules on the surface of gizzard. Length of worms are 20-35 mm and 0.4-0.6 mm in wide. Based on morphological image after examination detail part of *Amidostomum sp.* are well developed buccal capsule (137.03  $\mu\text{m}$  wide), buccal cavity in the center of anterior head, oesophageal teeth (54.98  $\mu\text{m}$  long) , long, muscullary and curved oesophagus (378.10  $\mu\text{m}$  long), striated transverse cuticle along the body. Posteriorly this worms is consist of vulva and digitate form behind the vulva, length of vulva is 45  $\mu\text{m}$  and width 11.1  $\mu\text{m}$ .

**IDENTIFICATION OF *Amidostomum sp.* IN GIZZARD OF MUSCOVY DUCK (*Cairina moschata*) IN NGANJUK SUB-DISTRICT USING SCANNING ELECTRON MICROSCOPY (SEM)**

Nur Anisa

**ABSTRACT**

The aim of this research was to identify the species of *Amidostomum sp.* in gizzard of Muscovy duck in Nganjuk. This research was conducted from March-July 2019 and sample were gotten from Nganjuk traditional market. Totally 42 samples of gizzard were examined in this study. The examination was done by Scanning Electron Microscopy (SEM) as the main processed and Semichon's acetic carmine stained for supporting processed. Six birds (14.28%) were positively infected by *Amidostomum sp.* in gizzard, specifically in lumen mixed with digestible food. Gross appearance showed elongated round shape and transparent to creamy white color. Their length was about 20-35 mm and 0.4-0.6 mm wide. Detail anterior and posterior structure has been found. Buccal capsule (137.03  $\mu\text{m}$  wide), buccal cavity, esophageal teeth (54.98  $\mu\text{m}$  long), long-muscularly and curved esophagus (378.10  $\mu\text{m}$  long), vulva area (45  $\mu\text{m}$  long, 11.1  $\mu\text{m}$  wide) and digitate structure behind it as main identical structure in female worms, the distance from vulva to tail was 91.90  $\mu\text{m}$ . Striated transverse cuticle along the body also appear with unique longitudinal depressed structure from head to tail.

Keywords: *Amidostomum sp.*, gizzard, Muscovy duck and SEM.