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Occurrence of Helminthic Infection in Ricefield Eel's (*Monopterus Albus*) in Surabaya, East Java

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Abstract

Out of 56 Ricefield eels examined for helminthic infections in Surabaya, East Java, 26 were infected with *Clinostomum complanatum* metacercariae, Proleptinae larvae and the fourth stage larvae of *Eustrongylides ignotus* (L4). Occurrence of helminthic infection in Ricefield eels (*M. albus*) was recorded 46.43%.

Key word : prevalence of worm, in ricefield eels

In Indonesia there are three types of eel, Ricefield eel (*M. albus*), swamp Eel (*Synbranchus bengalensis*) and the eel (*Macrotrema caligans*). Ricefield eels are marketed in Surabaya city obtained naturally from Ricefield. Several types of freshwater fish are likely to be infected with endoparasite worm,

This paper reports the occurrence of helminthic infection in the intestines, liver and kidney of Ricefield eel (*M. albus*) in East Java.

Materials and Methods

A total of 86 Ricefield eel's were examined for helminthic infection in different location viz., Karah Fish Market (Location A), Simo traditional market (Location B), Keputran traditional market (Location C), Sutorejo traditional market (Location D) and Krembangan traditional market (Location E).

Identification of parasite was undertaken based on Hoffman (1999), Kabata (1985) and Levine (1990).

Results and Discussion

In this study, maintenance of *Clinostomum complanatum* larve of proleptinae larvae and L4 stage of *Eustrongylides ignotus* were recorded in the intestine, liver and kidney Ricefield eel's in East Java (Table I).

Table I. Occurrence of heminthic infection in Ricefield eel's in different locations.

Location of sample	Type of Organ and parasites		
	Intestine	Liver	Kidney
A	L4 <i>E. ignotus</i> and Proleptinae larvae	<i>C. complanatum</i> metacercariae and Proleptinae larvae	<i>C. complanatum</i> metacercariae
B	Proleptinae larvae and L4 <i>E. ignotus</i>	Proleptinae larvae and <i>C. complanatum</i> metacercariae	<i>C. complanatum</i> metacercariae
C	Proleptinae larvae and L4 <i>E. ignotus</i>	<i>C. complanatum</i> metacercariae	-
D	Proleptinae larvae and L4 <i>E. ignotus</i>	Proleptinae larvae	<i>C. complanatum</i> metacercariae
E	Proleptinae larvae and L4 <i>E. ignotus</i>	<i>C. complanatum</i> metacercariae	-

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Fig 1. *C. complanatum* metacercariae
a) Binocular microscope with lucida camera,
b) Staining carmine

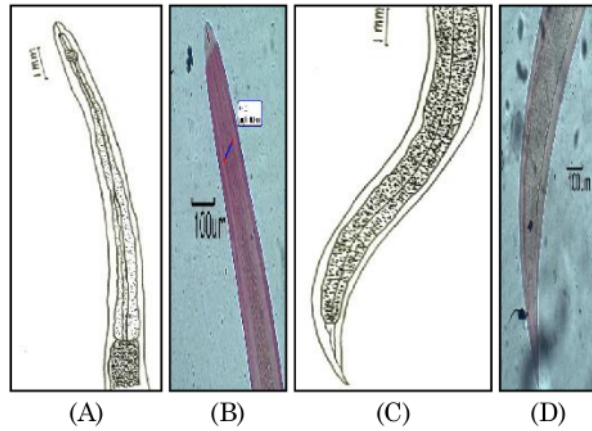


Fig 2. Proleptinae larvae :
(A) Anterior, binocular microscope with lucida camera (Scale: 1mm),
(B) Anterior staining carmine (Scale: 100µm),
(C) Posterior, binocular microscope with lucida camera (Scale: 1mm),
(D) Posterior, staining carmine (*Esophagus, Nerve Ring*)

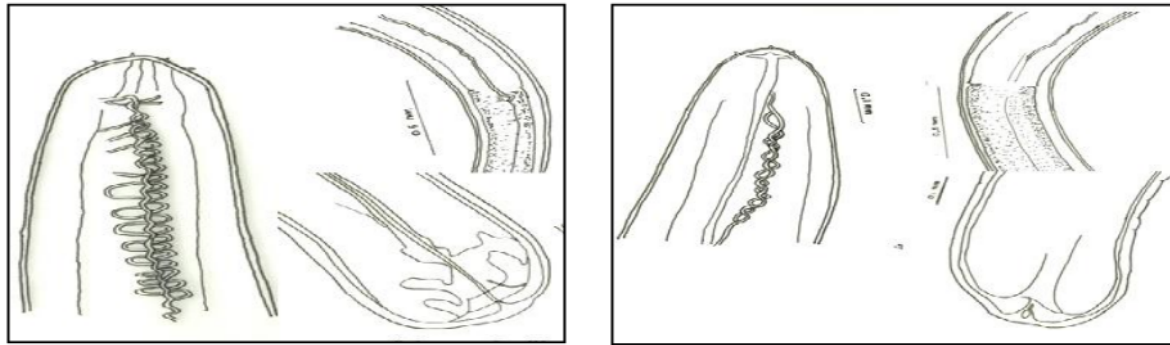


Fig 3. Fourth larva *E. ignotus* binocular microscope with lucida camera
(A-C) Male, (A) Anterior (Scale: 0.10 mm), (B) The middle body (Scale: 0.5 mm), (C) Posterior (Scale: 0.1 mm),
(D-F) Female, (D) Anterior (Scale: 0.1 mm), (E) The middle body (Scale: 0.5 mm), (F) Posterior (Scale: 0.1 mm),
(1) Labial papillae, (2) Intestine tract, (3) Three cuticle layers, (4) Spicule.

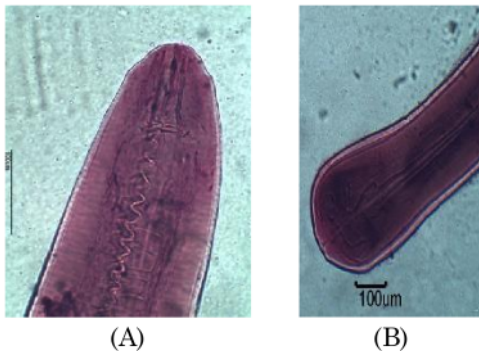


Fig 4. Staining carmine of fourth larva *E. ignotus* male
(A) Anterior (Scale: 100µm), B. posterior (Scale: 100µm)

Table II. The occurrence of helminthic infection in Ricefield eel's

Location	The number of examined sample (Fish)	The number of infected sample (Fish)	Prevalence (%)
A	24	13	54,17
B	8	4	50
C	8	3	37,5
D	8	3	37,5
E	8	3	37,5
Total	56	26	Average = 46,43

The level of occurrence of helminthic infection in the intestine, the liver and kidneys of Ricefield eel's was 54.17%, 50.5%, 37.5%, 37.5% 37.5% in location A,B,C,D and E respectively. The overall occurrence of helminthic infection was 46.43% (Table II).

Cameron (2002) revealed that the prevalence of low category as 10% and very high category as above 50%.

In this study Ricefield eel's infested with mixed infection of, *C. complanatum*, Proleptinae and *E. ignotus* L4 which is similar to that of Ibiwoye *et al.* (2004).

Summary

The helminthic infections in different organs in Ricefield Eels and the species of parasite in

different locations in East Java is documented in this study.

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Haemato-Biochemical Effects of Bupivacaine alone and in Combination with Xylazine and Pentazocine for Lumbar Epidural Anaesthesia in Buffalo Calves

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Abstract

The study was conducted on 18 non-descript buffalo calves ranging from 6 - 8 months of age weighing 55-75 Kg and were divided into three treatment groups six animals each. The animals of group A were treated with lumbar epidural injection of Bupivacaine @ 0.15mg/kg, Group B were treated with Bupivacaine @ 0.15mg/kg with Xylazine @ 0.05mg/kg and group C was treated with Bupivacaine @ 0.15mg/kg with Pentazocine @ 0.5mg/kg. Haematological studies revealed significant (P<0.05) decreased

in TLC, Hb, PCV while DLC revealed a significant increase (P<0.05) in neutrophils in group B. Serum glucose and ALT showed a significant (P<0.05) increase in all the three groups. BUN and AST showed a significant (P<0.05) increase in group B. The serum creatinine values showed a non-significant increase and serum total protein decreased non-significantly in all the groups. However, the values were compensated and returned towards pre-administration level by 24 hrs. It was concluded that bupivacaine alone and in combination with pentazocine and xylazine can be safely used for lumbar epidural anaesthesia in buffalo calves.

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