

**FACULTY OF AGRICULTURE TECHNOLOGY & FISH SCIENCES
DEPARTMENT OF FISH SCIENCES
ARESERCH SUBMITTED IN FUIFILLMENT FOR THE REQUIREMENT
OF B.SC. (HON) DEGREE.
SURVEY ON INTERNAL PARASITES OF SOME FISHES FROM JEBEL AULIA
DAM**

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الخلاصة

اجريت هذه الدراسة على نوعين من اسماك المياه العذبة بالنيل الابيض فى منطقة جبل اولياء فى الفترة من منتصف فبراير وحتى منتصف ابريل وانواع الاسماك التى اجريت عليها الدراسة :

أوريوكروميس نيلوتيكس (بلطي) وسينودونتس شال (قرقور) .
جمعت هذه العينات من النيل الابيض فى منطقة خزان جبل أولياء للاستقصاء عن وجود طفيليات داخلية (ديدان) عدد العينات التي أخذت كانت 30 سمكة واثبتت الدراسة ان 22 سمكة مصابة من جملة العينات وكانت نسبة 73.33% .

واثبتت الدراسة بوجود الاصابة بأكثر من نوع واحد من الطفيليات الداخلية الآتية :-

- ديدان النيमतودا بنسبة 67.16%
- ديدان التريمتودا بنسبة 19.40%
- ديدان السيستودا بنسبة 7.46%
- ديدان شوكية الراس بنسبة 5.97%

ABSTRACT

This survey was carried out on 30 fresh water fishes collected from the white Nile in jebel aula dam area the study fish *Oreochromis Niloticus* and *synodontis schall* determined the internal parasites the found results 22fish infected with 8species of parasites ,nematodes two species with prevalence 67.16%, Cestodes three species with prevalence 7.46%, Trematodes one species with prevalence 19.40% . Acanthocephala one species with prevalence 27%,and *dactylogyrus*

Objective

To establish the effect of internal parasites disease to protect the fish health

Materials and the methods

In this survey the viscera of 30 fresh water fishes were investigated for the internal parasites in two species of fish *orochromis niloticus* and *synodontis schall* were collected from jebel aulia dam on the white Nile, 25 miles south of Khartoum

Methods

The visceral organs were examined carefully, the stomach and intestine were placed in separate petridish that contains tap water, detected parasites were placed on clean Petri dish after that fixated and examined under the microscope.

Cestodes and trematodes

Cestodes were washed in normal saline and then put between two slides freshly stretched, then put in bouins fixative and left for 5 or 7 days. then transferred to 70% Ethanol and stained with ace to carmine for 15 minutes then transferred to descending grades of Alcohol 70-80-90-100% for 5 minutes in each grades then cleared with xylene For one minute and mounted with canda balsam and cover with a cover glasses to examined.

.Nematodes

The nematodes were stretched out and fixed according (Mahony,1966)in warm 70%Ethanol.Glycerol was added to prevent dring out of the specimens .they were mounted according to seahorse's method described by (mahony,1973)they were transferred from the fixative to as mall patridish containing a mixture of 95parts of 96%Ethanol and 5parts of Glycerol. the dish was kept partially closed for24 hour till evaporation of the Ethanol has taken place, so nematodes would be in pure glycerol

Acanthocephala

Acanthocephala parasites were left for about one hour in normal saline to allow the proboscis then were fixed in70alcohol and kept in glycerol finally to examine.

RESULTS

In This search viscera of 30 fresh water fish from Jebel Aulia reservoir were examined for internal parasites 22 out of 30 fishes (73.33%) were infected with two species of Cestodes adult with the prevalence 7.45 % , larval Metacestode , two species of nematode with the prevalence 67.16 % , one species of Trematodes with the prevalence 19.40% , one species of Acanthocephalans adult with the prevalence 5.97 % t and acanthor (larva stage) and one species of monogenic (macrogronactylus) sp all of them isolated from elementary tract

Nematodes

Procamallanus laeviconchus

Classification

Phylum: platyhelminth

Class: Phasmidia

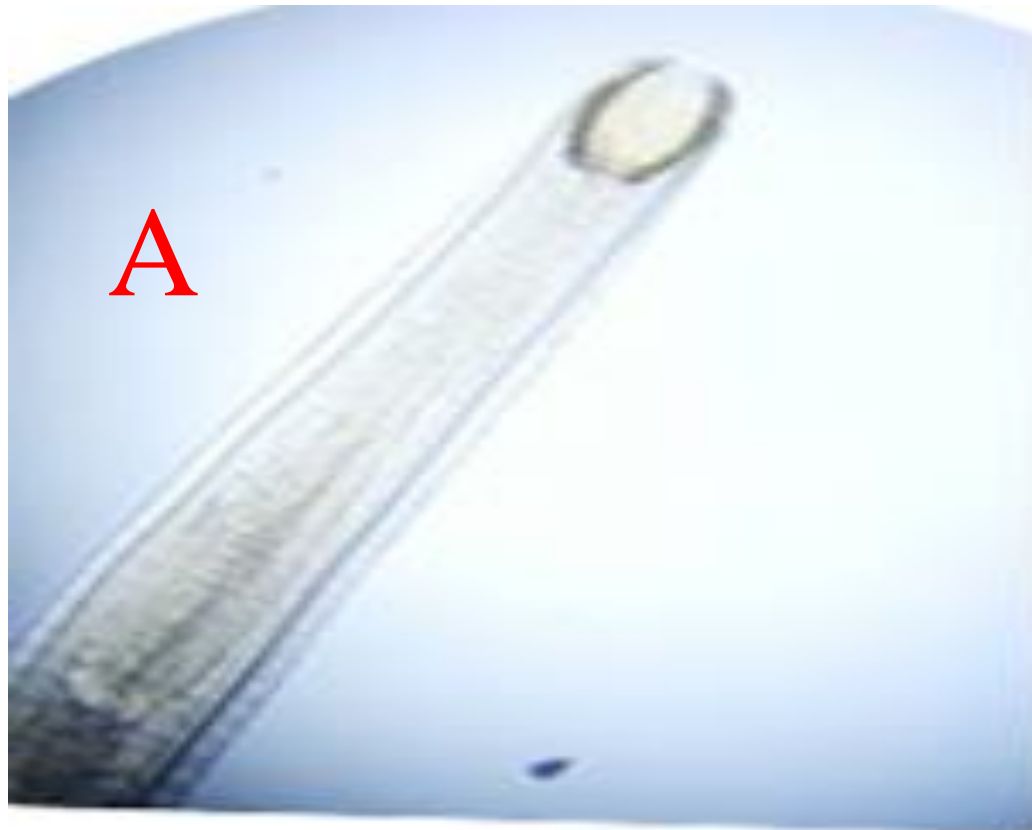
Family: Camallanidae

Genus: Procamallanus

Species: Laeviconchus

Description

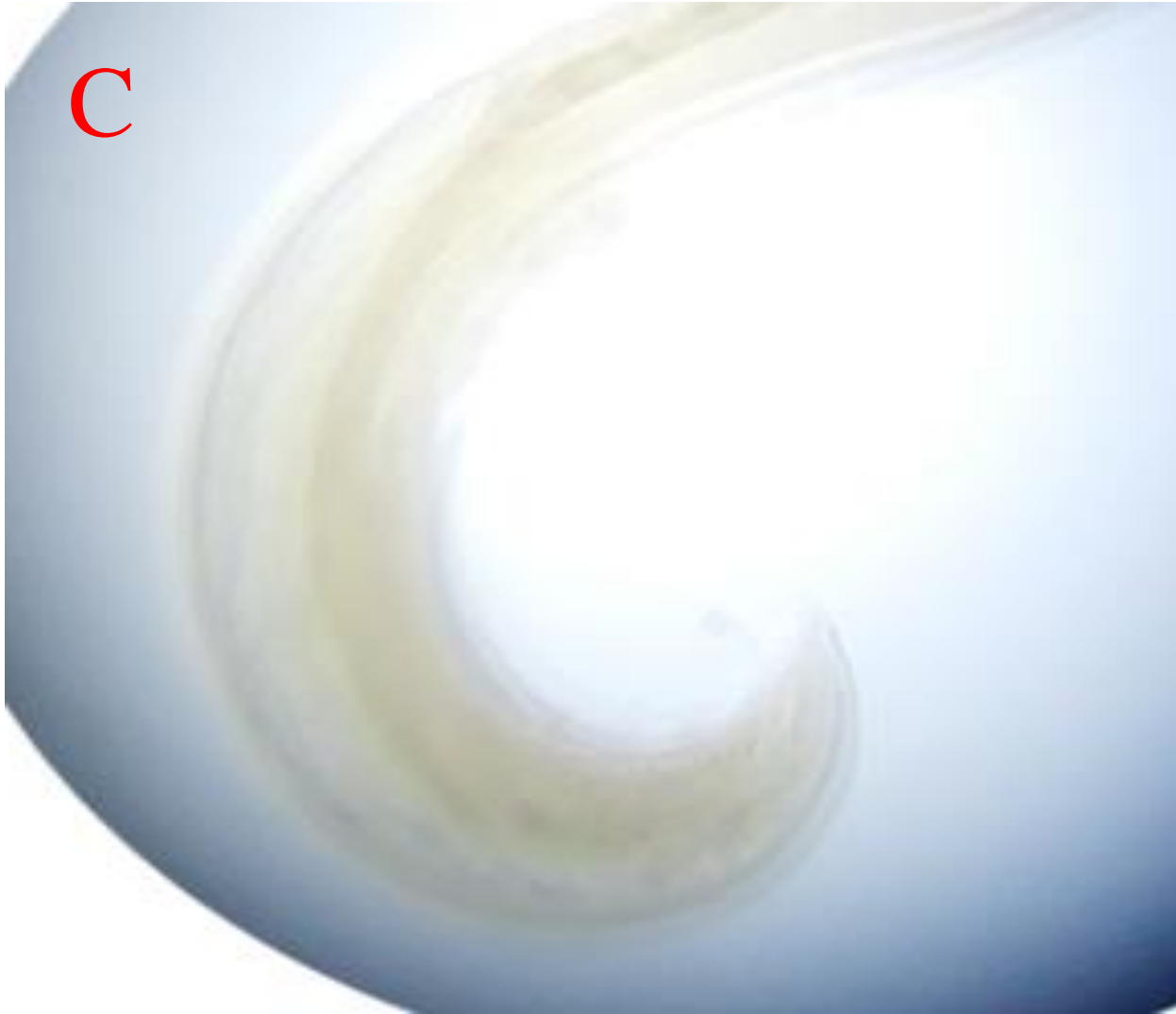
Based 25 female- 2 male These worms are medium sized red in colour one freshly were found in stomach.the buccal capsule is large,*cup-shaped*.



A : Anterior tip



B: posterior tip of female



C : posterior tip of male

Contraceacum

Family: hetesocheilidae

Species: Conteraceacum

Host: Oreochromis niloticus

Site of infection: Gills

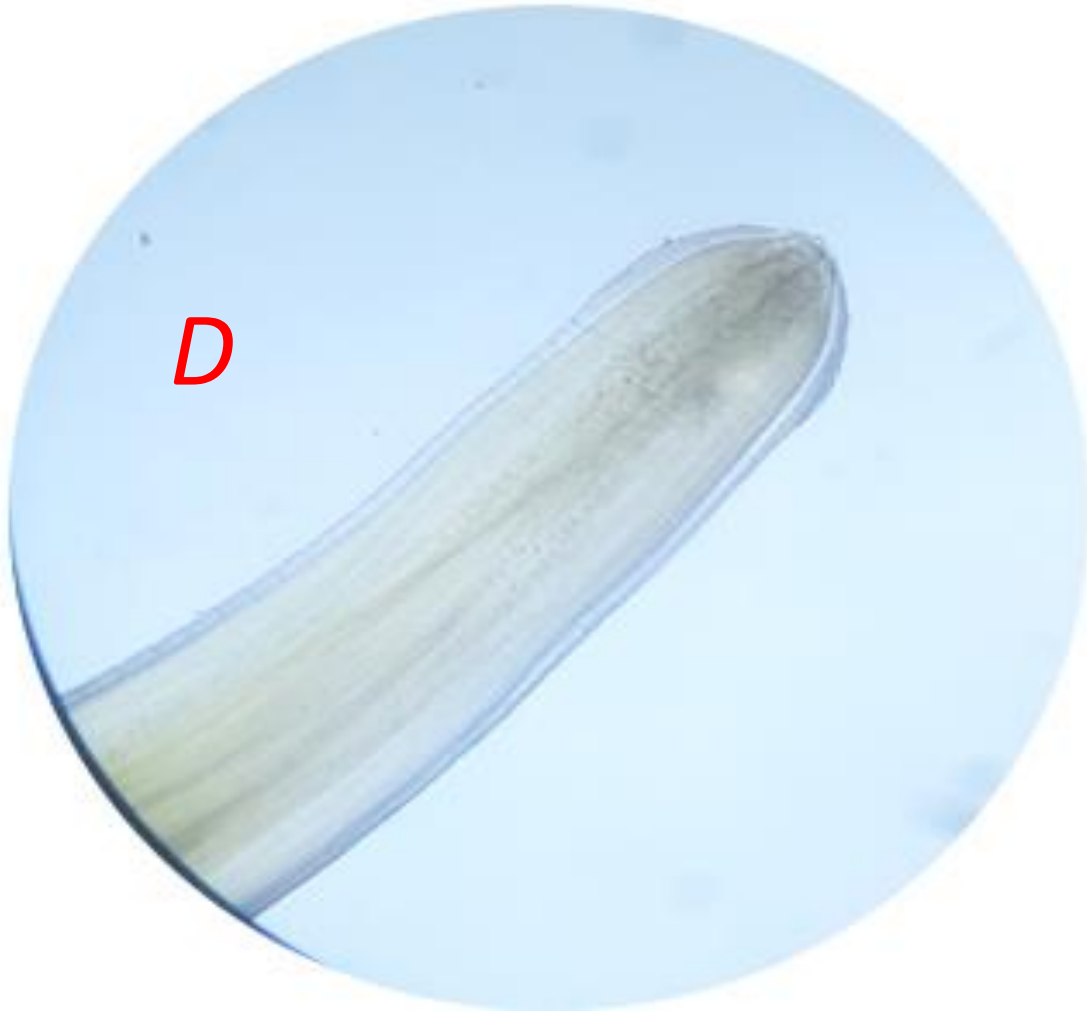
Prevalence of Infection: 73.33%

Intensity: 1-3

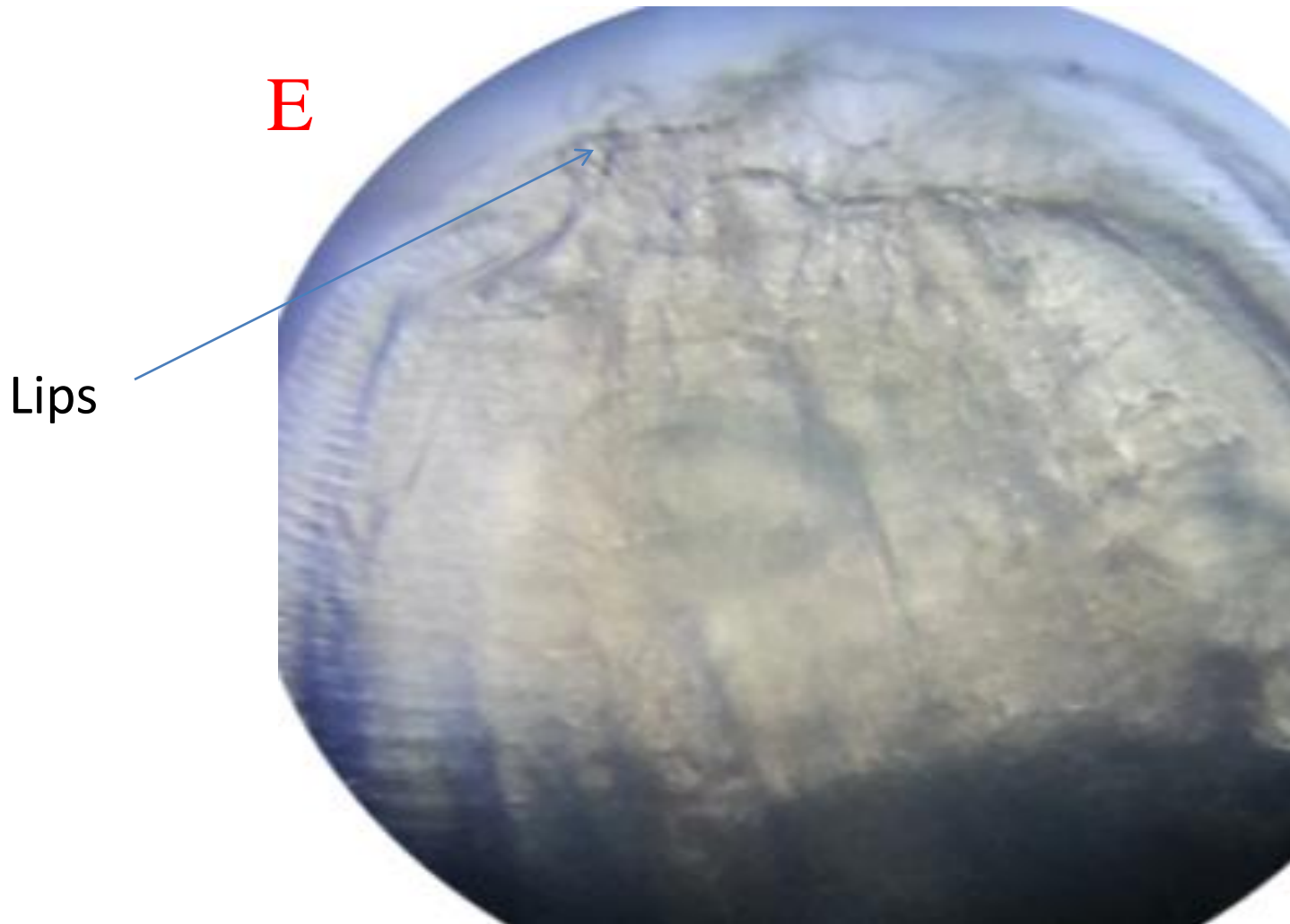
Description

These worms found in two stage larvae and adult ,The body covered with smooth cuticule ,Three lips show in plat() it has long oesophagus ,and anus opening in lateral position .

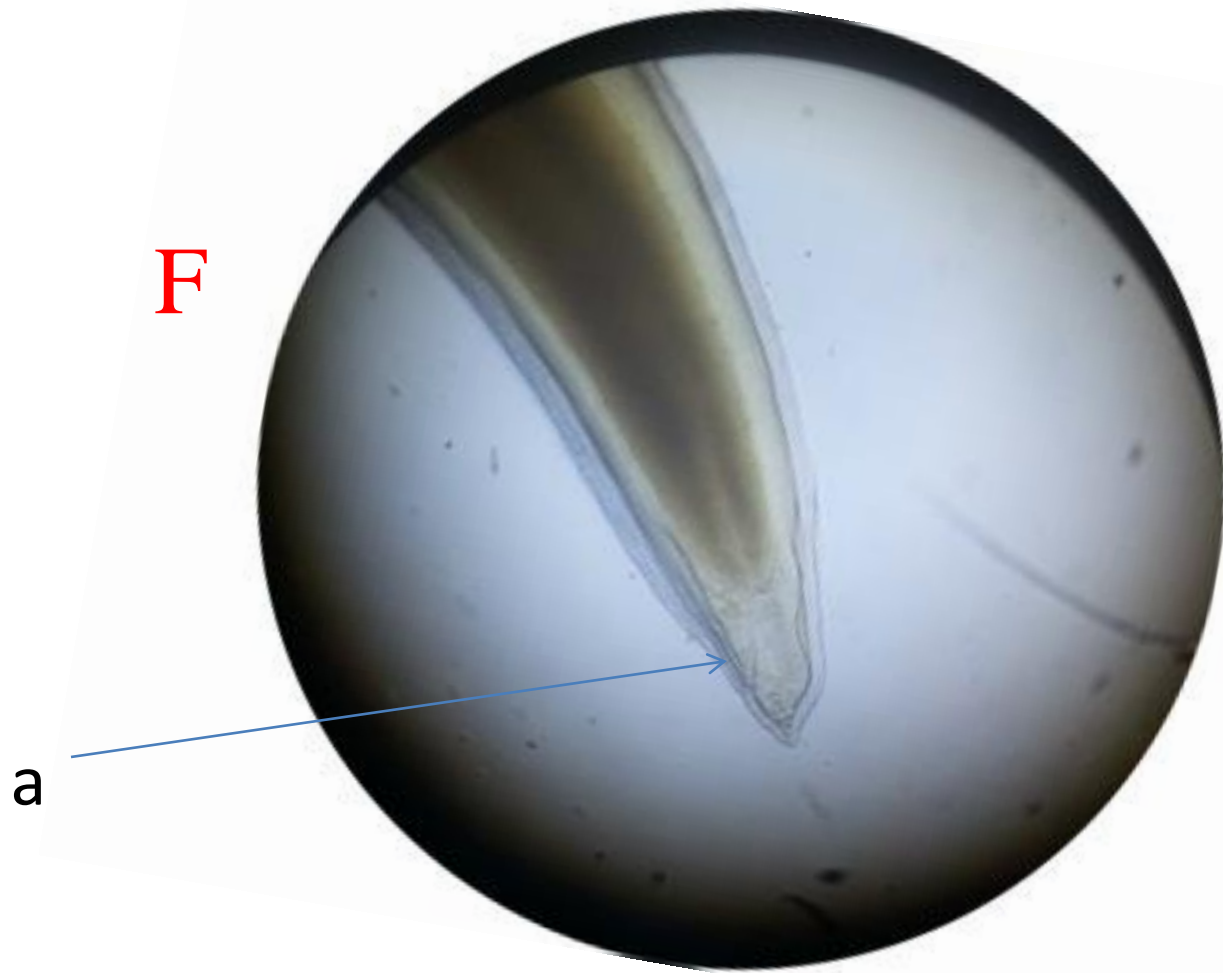
In the adult stage found genital opening



D : Head of Conteraceacum x10



E : three lips of *Contraceacum* x40



F: posterior tip of Conteraceacum shows opening anus (a)

Trematodes

Clinostomum Sp

Classification

Phylum: platyhelminth

Family

:*Clinostomumdae*

Genus : *Clinostomum*

Species : *Phalacrocoracis*

Host : *Oreochromis niloticus*

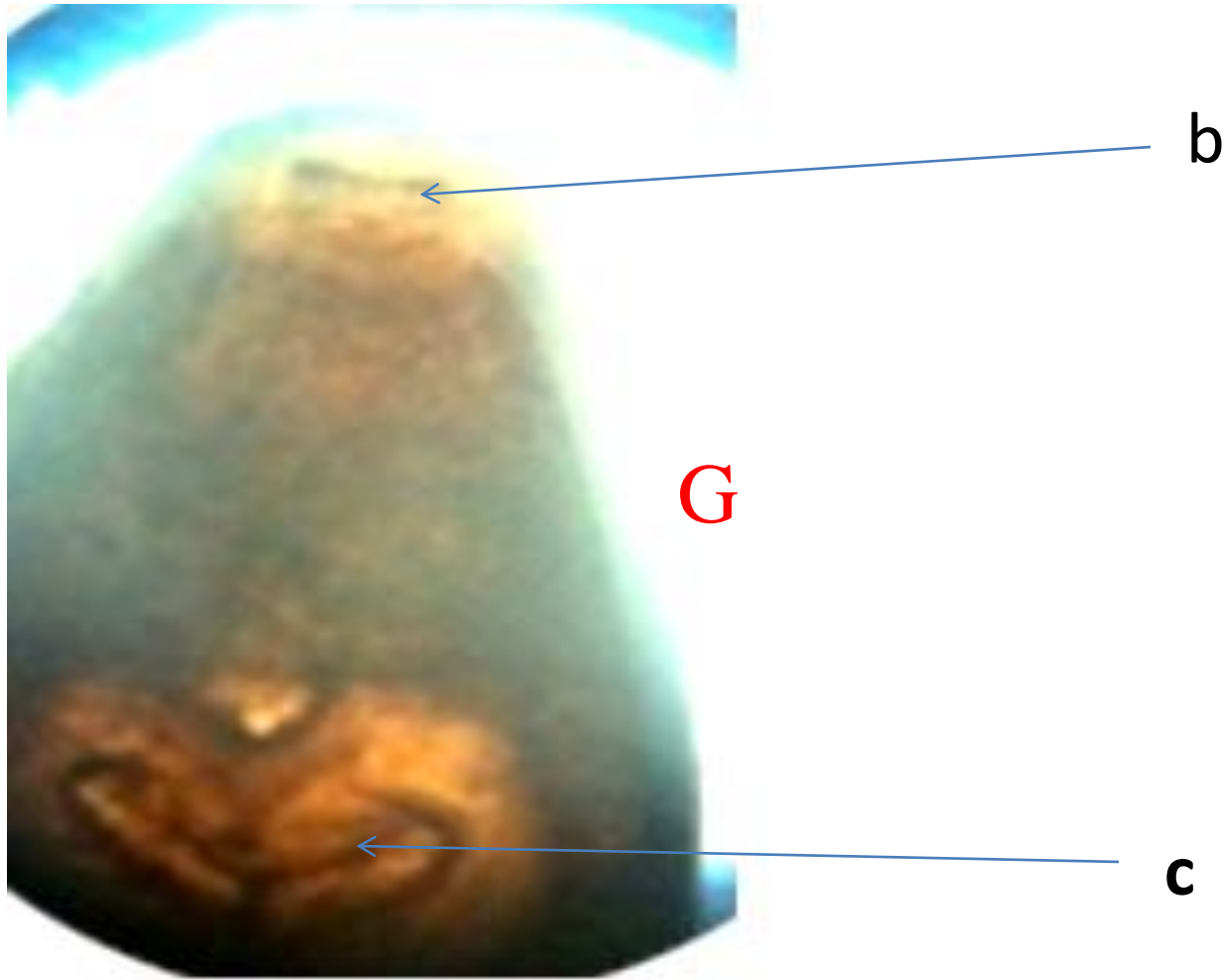
Site of infection: gills

Prevalence of infection: 100%

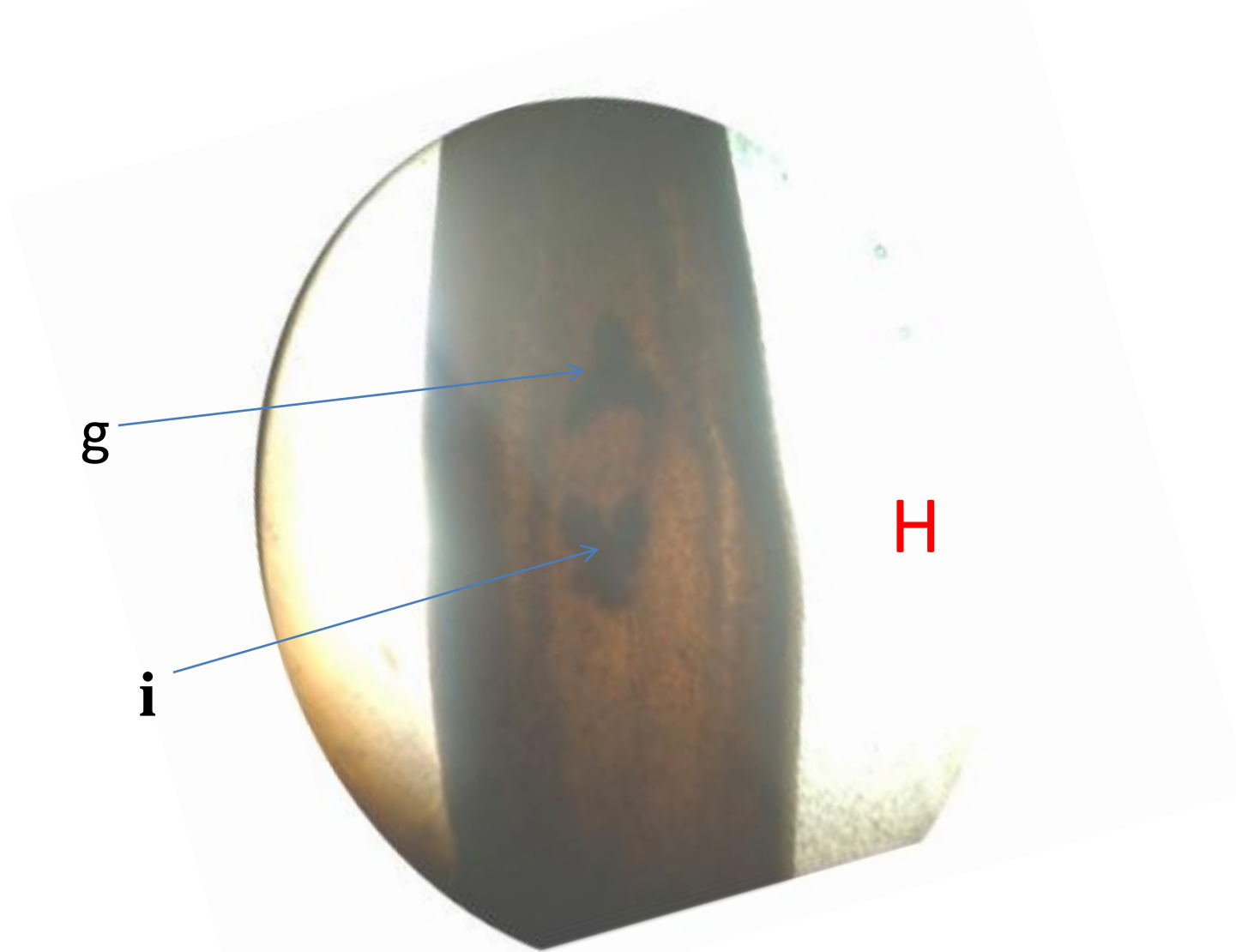
Intensity: 2_4

Description

These worms yellow in color, medium size it has oral sucker and ventral sucker, also it has intestinal caeca the genital organs in the middle of the body these worms are hermaphrodite according to key of (Utkoli, 1966)



G: interior of *Clinostomum* show oral sucker(b) and ventral sucker (c)



H:show middle of Clinostomum intestinal caeca (i) and genital area (g)

Cestodes

Housseyla sp

Classification

Class : *cestode*

Family : *proteocephalidea*

Genus : *myzophorus*

Species : *sodobium*

Host : *Synodontis schall*

Intensity : 1-2

Prevalence of infection : *16.67%*

Description

The length of these worm ranged from to it have scolep with four large suckers ,aneck is long , than segmentation young segment are smaller than mature segment the vitellaria are arranged in two lateral lines ,the genital proes are in the margin of segment .



I



I: Housseyla sp

proteocephalanus

Classification

Class : *cestode*

Family : *proteocephalidea*

Genus : *teania*

Species : *percae*

Host : *Synodontis schall*

Prevalence

of infection : 13.33%

Intensity : 1-2

Description

The scolex contain four large sucker the body segmented ,the cirrus sac open marginally antevior to the mid segment



J

J:Proteocephalide percae



K:Metacestode

Acanthocephala

Classification

Class : Cyracanthocephalida.

Family : Neoechinorhynchidae.

Genus : Paragorgorhynchus.

Host: *Orochromis niloticus*.

Prevalence infection: 27%.

Description

It has ahead evaginable proboscis crowned with several of recurved hook the worm are sack-like containing lemnisci connected to the proboscis and genital organs opening posteriorly .the sexes are separate and the male opening is within membranous bursa, the an elementary canals is absent ,the number and arrangement of the hooks on the proboscis the main criteria for differentiation of species.



L:Acanthocephala

dactylogyrus

Classification

Phylum: Platy helminthes

Class: Trematodes

Order: Monogenea

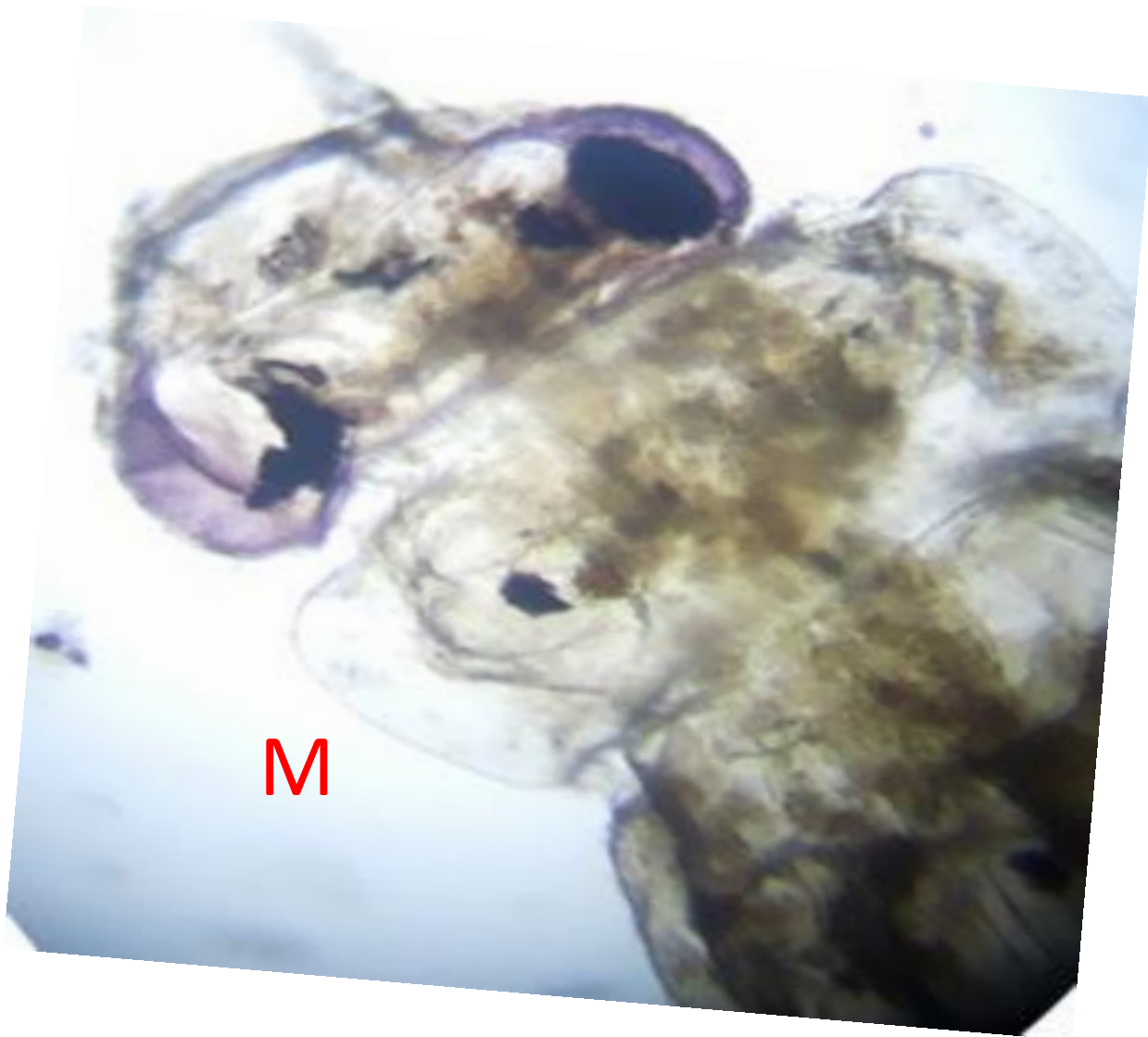
Family: Gyrodactylidae

Species: dactylogyrus

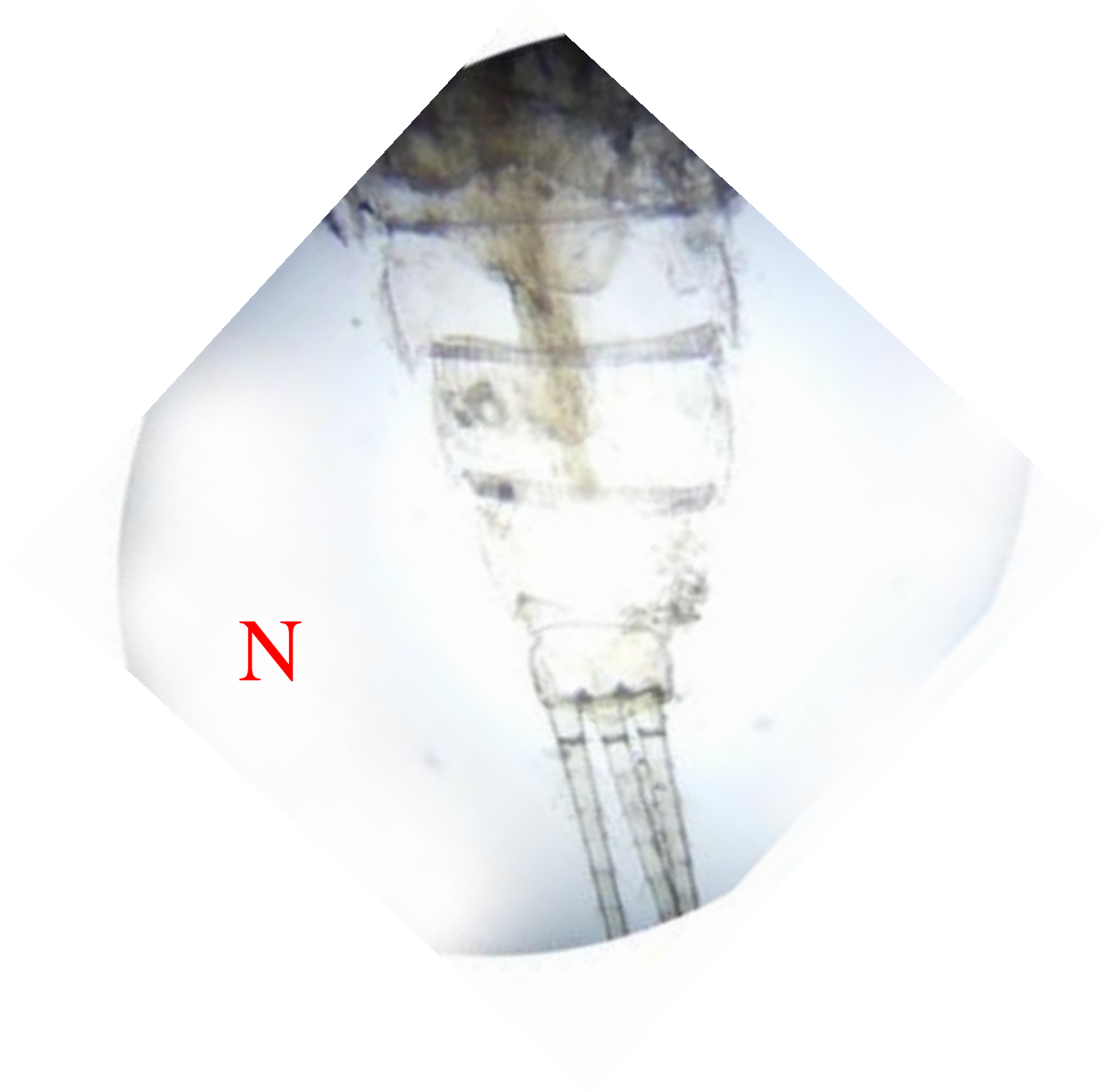
Host: Synodontis schall

Description

Green in color when freshly , flatworm 0.3-2mm in long have two anterior dorsal pairs of eyes and posterior ventral attachment organ , mouth with suckers and clamps for attachment , its endoparasites inhabiting ,hermaphrodite and viviparous



M:anterior tip of dactylogrus



N:Posterior tip

Table (1)

Over all prevalence of parasites

Parasites	Prevalence
Cestodes	33.3%
Trematodes	86%
Nematodes	100%
Acanthocephalan	26.66%

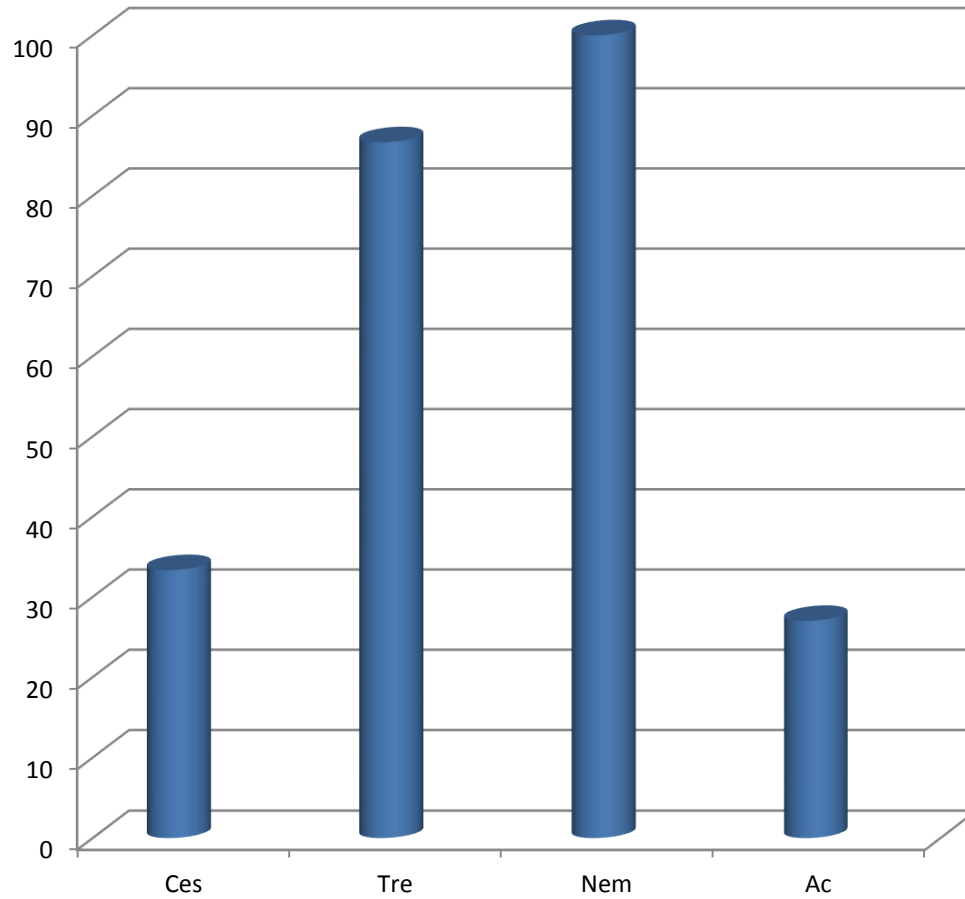


Fig (1) Over all prevalence of parasites

Table (2)

Shows the prevalence of parasites in two species of fish *Synodontis schall* and *Oreochromis niloticus* from Jebel Aulia reservoir

Species of fish	Ne(Infected examined %)	Ce(Infected examined %)	Tr(Infected examined %)	Ac(Infected examined %)
O.N	73.3	13.3	100	26.7
S.SC	100	53.33	0	26.7

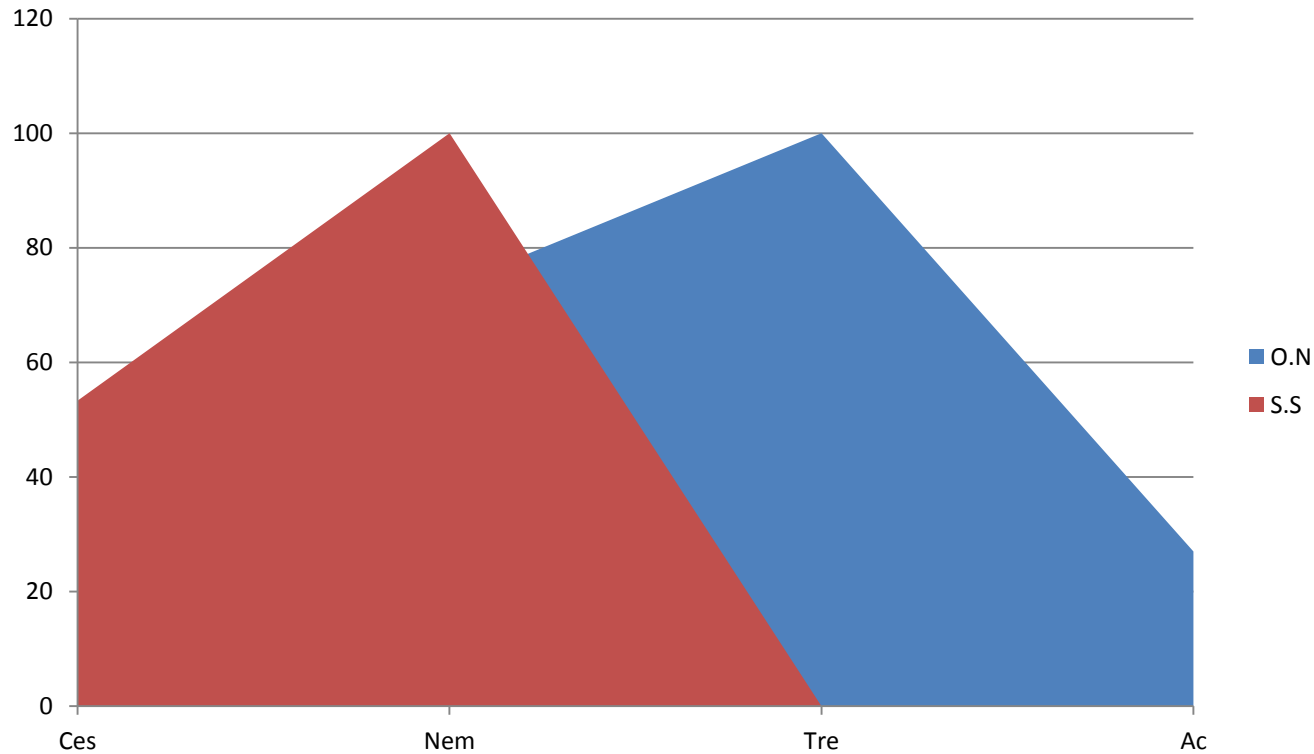


Fig (2)
Shows the prevalence of parasites in two species of fish *Synodontis schall* and *Oreochromis niloticus* from Jeble Aulia reservoir

Recommendation:

Study of helminthes parasites very important for meat fish quality specially the Sudan being to developing fish farming to produce health fish