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# Occurrence of *Hysterothylacium* Species (Nematoda: Raphidascarididae) from Some Marine Fishes from Iraqi Waters

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**Abstract:** Parasitological investigation of 22 species of marine fishes in territorial Iraqi waters, during the period from October 2019 till September 2020, revealed recording of six different species of *Hysterothylacium* Ward & Magath, 1917 in different developmental stages. These nematodes including two species in adult stage of *Hysterothylacium* viz, *H. reliquens* (Norris & Overstreet, 1975) and *Hysterothylacium* sp. (females only), two species of fourth larval stages (*Hysterothylacium* sp. type BH and *Hysterothylacium* sp. type BI) and two species of third larval stages (*Hysterothylacium* sp. type BA and *Hysterothylacium* sp. type BC). Identification of *Hysterothylacium* sp. was based on female only isolated from Blackfin stonefish *Pseudosynanceia melanostigma* Day, 1875; *Hysterothylacium* sp. type BH 4th larval stage isolated from Arabian backspot threadfin *Polydactylus mullani* (Hora, 1926) and *Hysterothylacium* sp. type BI 4th larval stage from purple-spotted bigeye *Priacanthus tayenus* Richardson, 1846; all these parasitic nematodes recorded for the first time in the Arabian Gulf. In addition, 14 fish species are considered as new hosts for *Hysterothylacium* sp. type BC 3rd larval stage. Description of female *Hysterothylacium* sp., *Hysterothylacium* sp. type BH and BI both 4th larval stages are given. The interest record of inverse intestinal caecum in some specimens of 3rd larval stage of *Hysterothylacium* type BC in some marine fishes of the current study is given.

**Keywords**: Ascaridida, Marine fishes, Nematoda, Southern Iraq.

## Introduction

Iraq has a narrow marine coast on Arabian Gulf, however the number of marine fishes exceeds on 322 species (Ali *et al*., 2018; 2021).

Al-Salim & Ali (2010) is considered as the first work in Iraq on the morphological taxonomic approach and diversity of *Hysterothylacium* species in which they also described adult, fourth and third larval stages of parasites from many marine fishes.

The third larval stage of *Hysterothylacium* were subsequently described from other fish marine hosts (Mhaisen *et al*., 2018; Al-Hasson *et al*., 2019; Bannai *et al*., 2021). Zhao *et al.* (2017) used molecular and SEM techniques to redescribe *H. reliquens* from the Oriental sole *Brachirus orientalis*. Ghadam *et al.* (2018) recorded the larval stage of *Hysterothylacium* type XVI from areolate grouper *Epienephelus areolatus* (Forsskål, 1775). Bannai (2018) recorded *H. persicum*

Shamsi, Ghadam, Suthar, Mousavi, Soltani, & Mirzargar, 2016 from orange-spotted grouper *Epinephelus coioides* (Hamilron, 1822) (misidentified as *E. tauvina*), and its larval stage from *E. areolatus*, largetooth flounder *Pseudorhombus arsius* (Hamilton, 1822) and *Saurida undosquamis* (now *Saurida macrolepis* Tanaka, 1917; see Inoue & Nakabo, 2006). Bannai *et al*. (2021) used ITS or rDNA technique to determination of diverse structure of the *Hysterothylacium* larvae population, including identified *H. amoyense* (Hsü, 1933) from Japanese threadfin bream *Nemipterus japonicus* (Bloch, 1791). Bannai & Jori (2022) used molecular analysis to study the richness of *Hysterothylacium* species larvae from two species of the groupers (Epinephelidae).

During survey of endohelminths parasite of marine fishes in Iraqi territorial waters, six species of different development stages of nematodes belonging to *Hysterothylacium* is described herein.

## Materials & Methods

A total of 668 specimens from 22 species of marine fishes (table 1) were collected from Iraqi marine waters during the period October 2019 till September 2020 by using trawl net, gill net and long line. Fresh specimens were transferred to the laboratory by cool boxes with crash of ice and examined for endoparasites within 48 hours. Adult nematodes were isolated from the intestine, while the larval stages were collected from visceral peritoneum. The nematodes were washed, fixed in hot 5% formalin and preserved in 75% ethanol, cleared in a mixing of glycerol: water (1:19 then 1:10 then 1:5 then 1:2) and then in pure glycerol (Moravec, 1994). Illustrations of the parasite were done by camera lucida attached on Leica compound microscope. Host taxonomy followed Carpenter *et al.* (1997) and verified with Fricke *et al*. (2023). Ecological terms are used according to Bush *et al*. (1997). Measurements of the parasites and their parts are given in µm unless otherwise indicated.

## Results & Discussion

During one year of survey of parasitic nematodes in marine fishes in Iraqi territorial waters; six species of nematode in the genus *Hysterothylacium* were isolated, three of them were newly recorded species are described herein.

**I: Adults**

***Hysterothylacium reliquens* (Norris & Overstreet, 1975)**

Hosts: *Diagramma pictum* (Thunberg, 1792), *Argyrops spinifer* (Forsskål, 1775), *Lethrinus lentjan* (Lacepède, 1802) and *L. nebulosus* (Forsskål, 1775).

**Site of infection: Intestine.**

Prevalence (%): 1.7, 2.6, 1.6 and 7.1, respectively.

Mean intensity: 1.7, 2, 3 and 2, respectively.

The current specimens have well developed lips, interlabia and cylinder oesophagus which agree with Ascaridida; owing to the presence of caecum, ventriculus and posterior appendage fall in Raphidascarididae and due to the excretory pore which opens bellow the nerve ring and spicules which are not very long, considered them in the genus *Hysterothylacium* Ward & Magath, 1917.

Most taxonomic characters in distinguishing the species of *Hysterothylacium* such as percentage of oesophagus length to body length, percentage of oesophagus to both caecum and to appendage, percentage length of spicules length to body length, number and

distribution of caudal papillae, the vulva distance from anterior end, alae width and the tail shape in both sexes conspecific with *H. reliquens* in previous studies (Petter & Sey, 1997; Al-Salim & Ali, 2010; Zhao *et al*., 2017). However, some minor differences were seen in the current specimens, such as the shape of distal end of spicule (Fig. 1), longer specimens (113 mm from *D. pictum*) as twice that recorded in previous studies; nevertheless these big specimens are similar to that reported in original description about 127 mm (Norris & Overstreet, 1975) from east southern of the United States.

In Iraq, *H. reliquens* was previously recorded from wide fish hosts, which have different food habits, such as Cynoglossidae, Lethrinidae and Trichuiridae (Al-Salim & Ali, 2010) and Soleidae (Zhao *et al*., 2017). The occurrence of this nematode from *D. pictum* added the Heamulidae as a new family and a new host for *H. reliquens*, as well as *L. lentjans* and *A. spinifer* as new hosts record.

***Hysterothylacium* sp. (Fig. 1)**

Host: *Pseudosynanceia melanostigma*.

Site of infection: Intestine.

Prevalence (%): 4.3.

Mean intensity: 1.

Description and measurement based on single specimen

White, median female worm 21.6 mm, and 0.56 mm in maximum width. Ratio of width to length 1: 38.5. Three well developed lips, 100 in length and 136 in width. Oesophagus 1350 in length and 160 in width, comprising 6.3% of body length. Nerve ring and excretory pore 420 and 620, respectively from anterior end. Ventriculus 125×130, intestinal caecum 260 in length and 120 in width. Appendage 630 in length and 60 in width. Ratio of the length of appendage to oesophagus 1: 2.1. Ratio of caecum to oesophagus and appendage 1: 5.2 and 1: 2.4, respectively. Vulva 6640 (31%) from anterior end. Eggs spherical 40-50 in diameter. Tail conical with sharp end ending with single spine. The female of *Hysterothylacium* sp. from *P. melanostigma* has a single spine on the tail. This character is common in the larval stages of *Hysterothylacium* and rare in adults in addition to absence of alae and transverse striation and short vagina. In Iraq, three species of *Hysterothylacium* were reported from marine fishes. *H. reliquens* (adult and fourth larval stage) from five fish species (Al-Salim & Ali, 2010; Zhao *et al*., 2017; Ghadam *et al*., 2018); adult *H. persicum* was recorded from *Epinephelus coioides* (misidentified as *E. tauvina*) by Bannai (2018), while the fourth larval stage of *H. persicum* was isolated from areolate grouper *Epinephelus areolatus*, largetooth flounder *P. arsius* and brushtooth lizardfish *Saurida undosquamis* (Richardson, 1848) (now *S. macrolepis* Tanaka, 1917; see Inoue & Nakabo, 2006). *H. amoyense* (Hsü, 1933) larva was isolated from *N. japonicus* (Bannai *et al*., 2021). Furthermore, two un identified species; *Hysterothylacium* sp. 1 (Female) from flat needlefish *Ablennes hians* (Valenciennes, 1846), Belanger's croaker *Johnius belangerii* (Cuvier, 1830), *S. undosquamis*, and Silver sillago *Sillago sihama* (Forsskål, 1775) (See Mhaisen *et al*., 2018) and *Hysterothyalcium* sp. 2 (juvenile male) from concertina fish *Drepane longimana* (Bloch & Schneider, 1801) (Al-Salim & Ali, 2010).

The ratio of oesophagus length to body length of the present specimen (6.3%) is less than that in above four species, in addition to difference in position of the excretory pore is more bellow the nerve ring). The ratio of

appendage to oesophagus in *Hysterothylacium* sp. from *P. melanostigma* is similar to that in *H. reliquens* only, but the other biometric characters differ between them. Bannai (2018) recorded *H. persicum*, based on molecular analysis, from orangespots grouper *E. coioides*; regarding to illustrations of *H. persicum*, Although, Bannai (2018) recorded adult stage, but he presented the illustration of fourth larval stage of the same species that recorded by Ghadam *et al*. (2018). The length of the appendage four times longer than the oesophagus (Shamsi *et al*., 2016), in compared with the appendage about 0.46 time of oesophagus length in *Hysterothylacium* sp. of the current study. The present *Hysterothylacium* sp. is conspecific with *H. amoglossi* Petter & Maillard, 1988 from two flatfish species: *Arnoglossus laterna* (Walbaum, 1792) and *Arnoglossus thori* Kyle, 1913, and it's larval stage reported from two scorpion fish species: *Scorpaena scrofa* Linnaeus, 1758 and *Scorpaena porcus* Linnaeus, 1758 from the Mediterranean Sea (Petter & Radujkovec, 1989) by body length, ratio of caecum to appendage and percentage length of oesophagus to body length. *Hysterothylacium* sp. 1 (reported as *Contracaecum* sp.) isolated from *J. belangerii* by Al-Daraji (1995) has longer body and smaller eggs than this of the current *Hysterothylacium* sp. Al-Salim & Ali (2010) described juvenile male of *Hysterothylacium* sp. from *D. longimana.* The latter species has 1:7 ratio of caecum length to appendage length and smooth tail tip compared with 1:2.4 and single spine in the current *Hysterothylacium* sp. Finally, based on unavailable matured males, the current nematode is impossible to determine its specific name, and suggest to preparing the name *Hysterothylacium* sp. 3 parasitic in marine fishes of Iraq. Moreover, *P. melanostigma* is considered here as a new host for this nematode.

**II: Fourth larval stage**

***Hysterothylacium* sp. type BH 4th larval stage (Fig. 2)**

Host: *Polydactylus mullani*.

Site of infection: Intestine.

Prevalence and mean intensity: 11% and 2.5, respectively.

Measurements (Based on four specimens)

Worms with 6550-12500 (9525) in length and 80-200 (152). Ratio of maximum width to length 1:49-82 (65). Anterior body end with one dorsal and two subventral lips. Interlabia absent. Fine striated cuticle. The oesophagus 600-850 (745) in length and 50-78 (65) in maximum width, oesophagus represents 6-9.2% of body length. Nerve ring and excretory pore 225-300 (264) and 237-320 (286), respectively from anterior extremity. Ventriculus 50-100 (70) in length and 40-80 (56) in width. Intestinal caecum 110-275 (201) in length and 25-50 (38). Ratio of caecum to oesophagus 1:2.7-5.5 (4); appendage 450-110 (762), maximum width 25-45 (33); ratio of length of appendage to length of oesophagus 1:0.7-1.3 (1:1); ratio of caecum to appendage 1: 3.5-4.1 (3.8). Rectum hyaline 100-140 (117) in length, with four (n=3) sub-spherical rectal glands. Tail 75-190 (146) with multi spines.

The ratio of caecum length to appendage length always similar among 3rd, 4th and adult of the same species of Anisakidae; The 3rd larval stage has boring tooth in the cephalic end and neither developed lips nor reproductive system; while boring tooth absent and the lips and reproductive begin to developed in the fourth larval stage (Berland, 1989). The current *Hysterothylacium*

specimens from *P. mullani* have lips without interlabia and with an early-developed reproductive system. Hence, they represent the fourth larval stage. All measurements and biometrics of the specimens agree with that of *Hysterothylacium* type MC (*H. fortalezae*) isolated from S*comberomorus maculatus* (Mitchell, 1815) off Gulf of Mexico (Deardroff & Overstreet, 1981). The present specimens are similar in all measurements, specially the shape of the tail except alae (present vs absent) to *Hysterothylacium* sp. type KH of Petter & Sey (1997) from *Scomberomorus guttatus* (Bloch & Schneider, 1801) off Kuwaiti waters. In some specimens, the developed tail of the fourth larval stage has many terminal spines inside cuticle of the third larval stage (tail with single spine, See fig. 2D). This phenomenon was previously reported in *H. longilabrum* in different larval stages in southern Chinese Sea (Li *et al*., 2012).

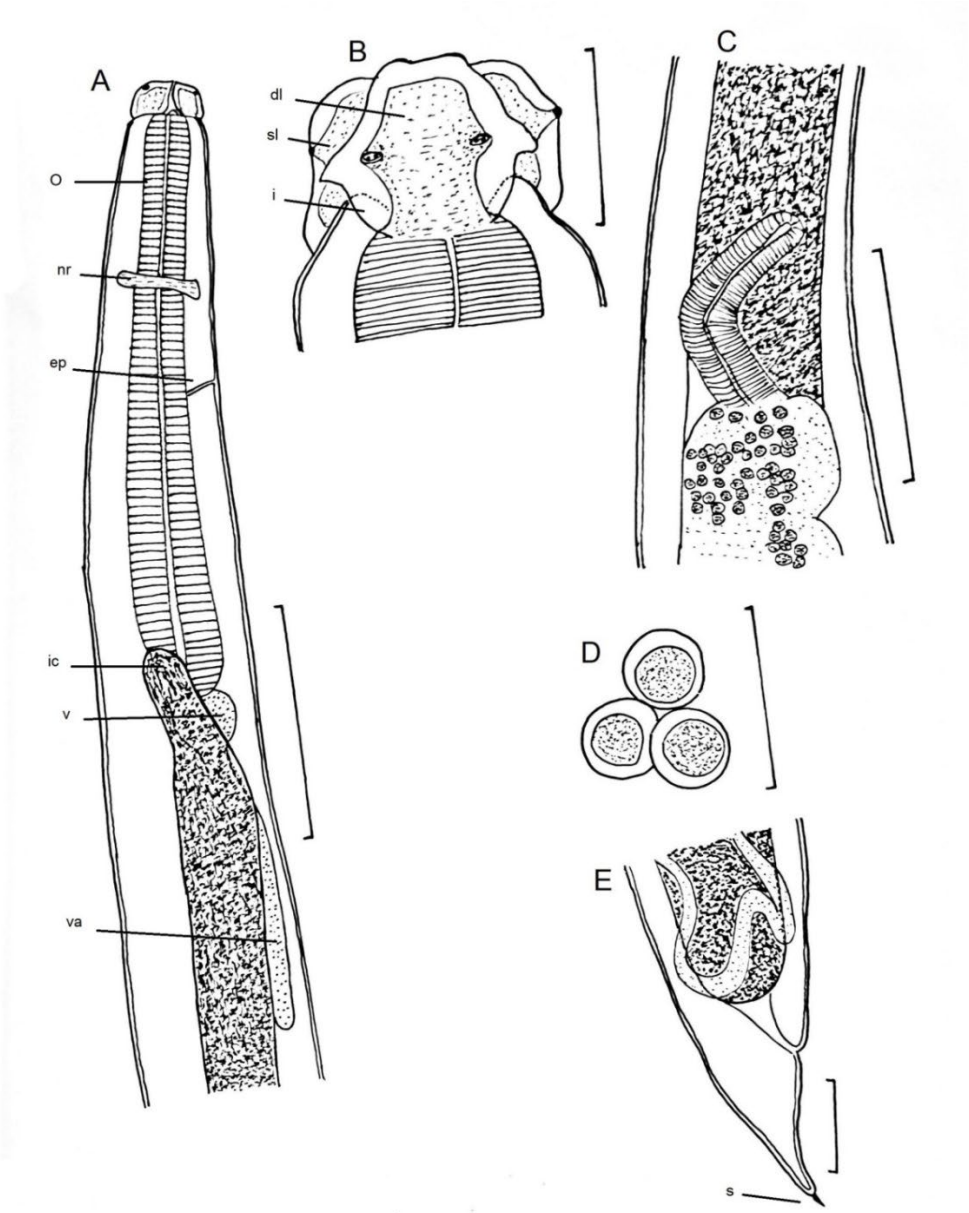


**Fig. (1): *Hysterothylacium* sp. female from *P. melanostigma*. A- anterior part, B- lips, C- vulva and vagina, D- eggs, E- tail. Abbreviations: dl-dorsal lip, ep- excretory pore, i- interlabia, ic- intestinal caecum, nr- nerve ring, o-oesophagus, s- spine, sl- subventral lip, v- ventriculus, va- ventral appendage. Scale bar: A & C= 500 µm, B and D=100 µm, E= 200 µm).**

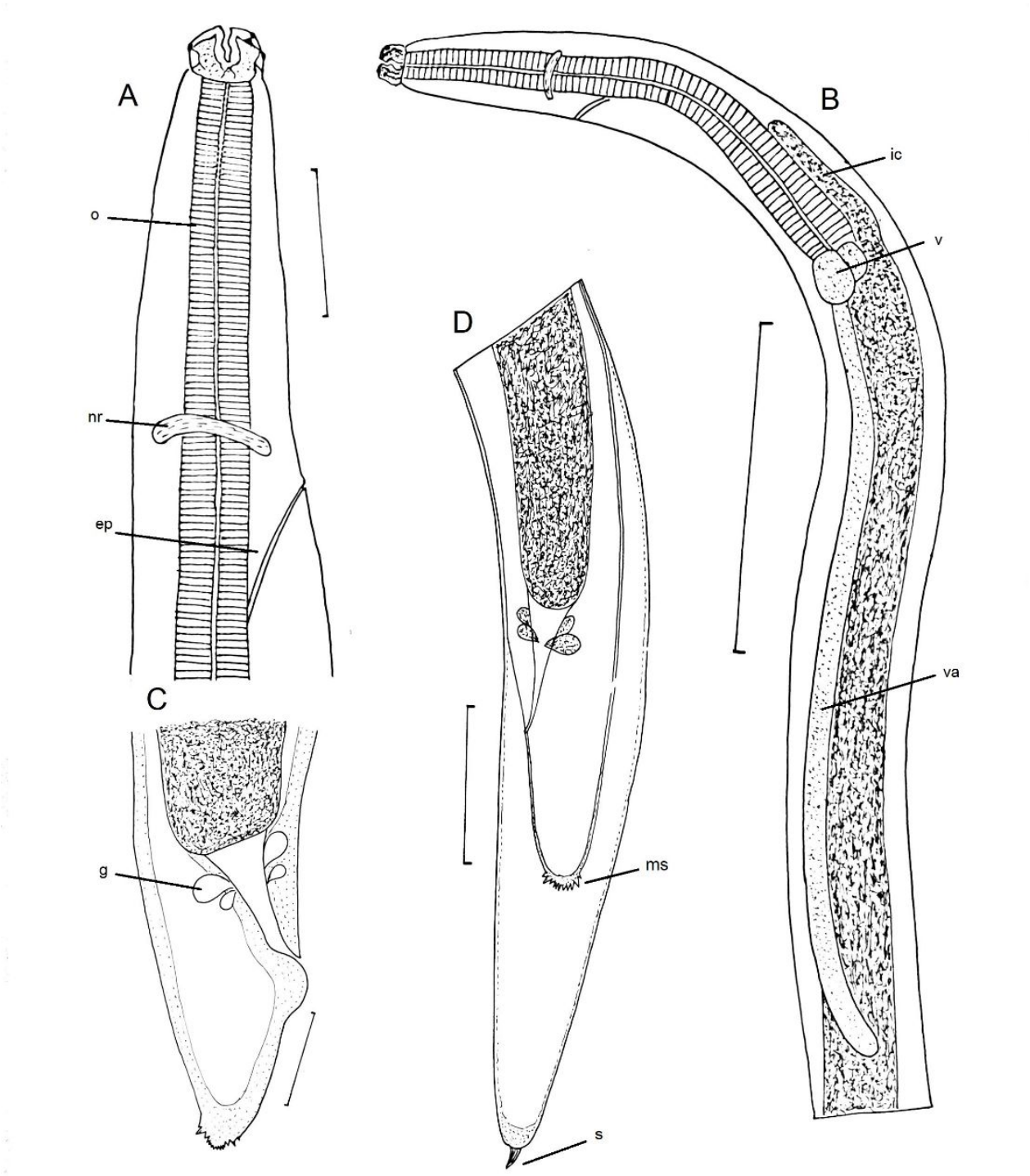


**Fig. (2): *Hysterothylacium* sp. type BH 4th larval stage from *P. mullani*. A- cephalic part, lateral view, B- anterior part, lateral view, C- posterior end, D- posterior end of early 4th larval stage molted inside cuticle of 3rd larval stage. Abbreviations: ep- excretory pore, g- rectal gland, ic- intestinal caecum, nr- nerve ring, o-oesophagus, s- spine, ms: multi spines, v- ventriculus, va- ventral appendage. Scale bar: A & C= 100 µm, B= 500 µm and D= 200 µm.**

Seven different types of larval stage of *Hysterothylacium* spp. were recorded in Iraq (Mhaisen *et al*., 2018). All of them differ from the current specimens by shape of tail and ratio of caecum to appendage. However, it is similar to *Hysterothylacium* type BG in tail shape, ratio of caecum to oesophagus and caecum to appendage, and it differs from the latter by appendage length, which is twice times of oesophagus (appendage equal to

oesophagus). Subsequently, it could be designated as *Hysterothylacium* sp. BH for this new type of nematode 4th larval stage in Iraq.

***Hysterothylacium* sp. type BI 4th larval stage (Fig. 3)**

**Host:** *Priacanthus tayenus*

Site of infection: Serosa of stomach and intestine; and body cavity.

Prevalence and mean intensity: 90.9% and 35, respectively.

Measurements (Based on 20 specimens)

Advanced larval stage seems in the beginning of 4th larval stage. Most of larvae were found encysted as single larva in each vesicle with milky liquid. The cephalic end is rounded and the lips are not fully developed; fine transversely striated body, 4850-15330 (9749). Gonads in the beginning of development (impossible to distinguish the males and females). Oesophagus relatively short and equal to appendage; caecum twice times of ventriculus. Tail conical with single terminal spine. The body with 4850-15330 (9749) in length and 138-400 (260) in maximum width. The ratio of width to length 1:35.3-38.3 (37.6). Nerve ring and excretory pore 210-430 (330) and 240-630 (429), respectively from anterior extremity. Oesophagus 460-980 (735) in length, representing 6-13% of body length, and 40-100 (75) in maximum width. Ventriculus sub spherical 42-120 (85) in length and 45-110 (79); Caecum 95-450 (220) in length and 37-80 (59) in width. Appendage 450-1000 (677) in length and 45-180 (86) in width and it is relatively equal to oesophagus length in ratio of 1:0.78-1.67 (1.1). Ratio of caecum to each of oesophagus and appendage 1:2-6 (3.6) and 1:2-6 (3.3), respectively. The rectum, 63-160 (106) with 4-6 rectal glands. Tail is conical with sharp tip 92-300 (177) ending with a single spine, 5-8 (7) in length.

The measurements and biometric characters of important taxonomic characters agree with *Hysterothylacium* sp. type MD that described from bighead mullet in Mississippi river (Deardorff & Overstreet, 1981) and also with *Hysterothylacium* sp. type KB from seven marine fishes of Kuwait market (Petter & Sey, 1997).

Berland (1998) studied the biology of some *Hysterothylacium* species and exhibited that the third larval stage which molted in stomach of fish host to develop to fourth larval stage has tail and lips similar to that in adult, but cloacal papillae and spicules, vulva and vagina are not clear, subsequently so difficult to distinguish between 4th and early 5th (adult) stages.

Qualitative development in the third larval stage happens in some cases inside transport or reservoir hosts (Moravec, 1994), or inside intermediate crustaceans (amphipods) to fourth larval stage (Luque *et al*., 2007). On the other hand, *H. haze* (Machida, Takahashi & Masuuchi, 1978) Deardorff & Overstreet, 1981 was matured in the body cavity of fish (Yoshinaga *et al*., 1989), may confirm the probability of the present nematode larvae that have the same microhabitat for maturity in the future. Owing to the differences in measurements of taxonomic character, including tail tip of *Hysterothylacium* larvae, have been recorded in Iraq. This type adds to the previous nine types and named here *Hysterothylacium* sp. type BI 4th larval stage.

**III: Third larval stage**

***Hysterothylacium* sp. BA 3rd larval stage**

Host: *Argyrops spinifer*.

Site of infection: Intestine.

Prevalence and mean intensity: 5% and 1.5, respectively.

The measurements and description of these larvae agree with the same species in Al-Salim & Ali (2010). Al-Salim & Ali (2010) described these larvae from two bony fishes and two shark species in Iraq including *Acanthopagrus arabicus* Iwatsuki, 2013 (recorded as *A. latus*), *Cynoglossus arel* (Bloch & Schneider, 1801), *Chiloscyllium arabicum* Gubanov, 1980 and *Sphyrna mokarran* (Rüppell, 1837). These larvae has long ventral appendage (five times of the oesophagus length) and long caecum, which reaches to level of nerve ring. Subsequently, these larval types were reported from two sparid fishes: *A. arabicus* and *A. spinifer* from Iraqi marine waters (Mhaisen *et al*., 2018).

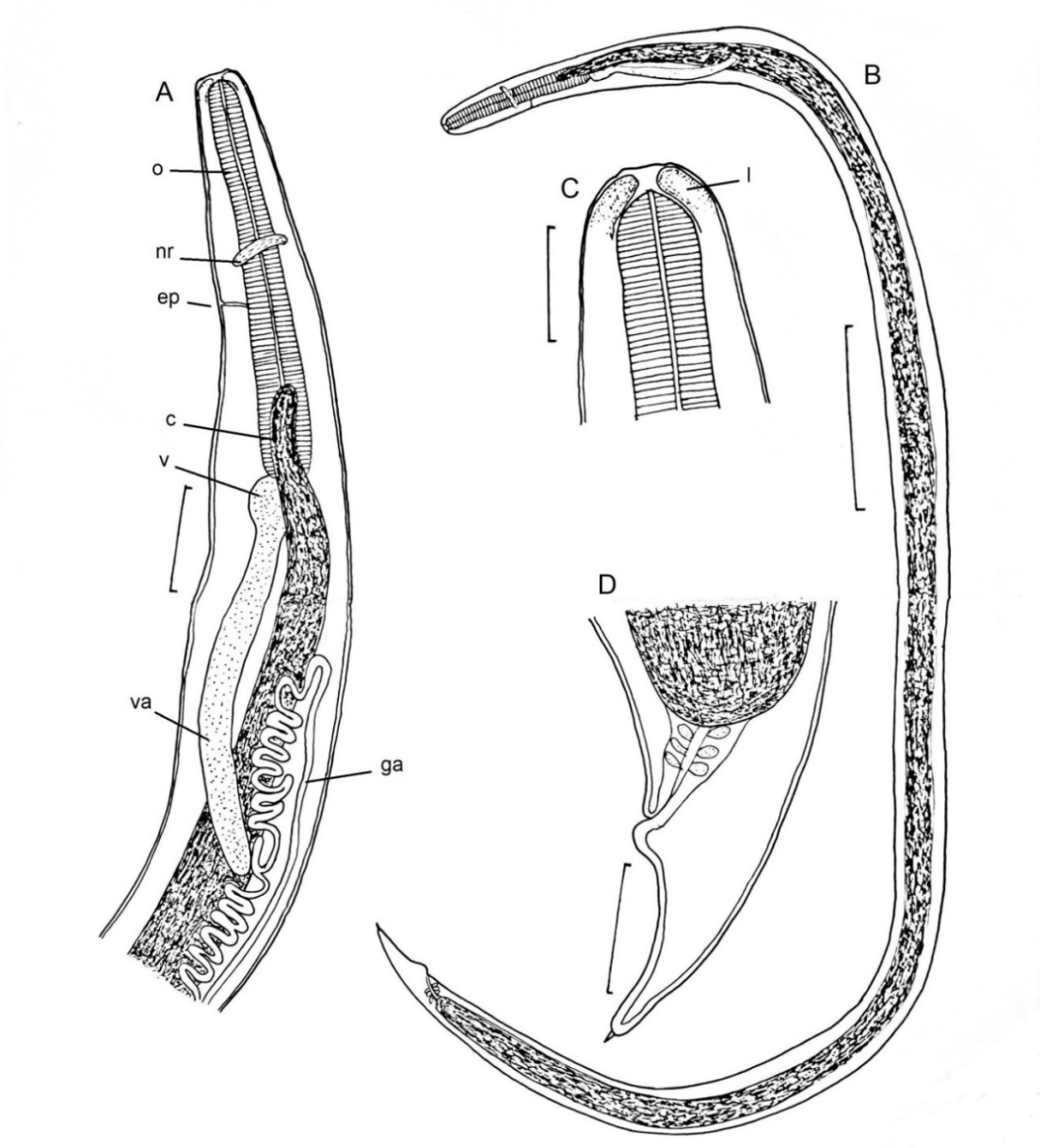


**Fig. (3): *Hysterothylacium* sp. type BI 4th larval stage from *P. tayenus*: A- anterior part, B- whole body, C- cephalic end, D- tail with terminal spine. Abbreviation: c- caecum, ep- excretory pore, ga- gonad, ic- intestinal caecum, l- lip, nr- nerve ring, o- oesophagus, v- ventriculosus, va- ventral appendage. Scale bar: A = 200µm, B= 1000 µm, C and D=100 µm).**

***Hysterothylacium* sp. BC 3rd larval stage**

Host: 16 species of fishes (table 1)

Site of infection: Body cavity, liver, mesenteries, serosa of stomach and intestine.

Prevalence and mean intensity: 5% and 1.5, respectively.

The measurements and description of these larvae agree with the same species in Al-Salim & Ali (2010).

**Table (1): Infection of *Hysterothylacium* sp. Type BC larva in different host fish species with its prevalence and mean intensity**.

| Scientific name of hosts | Number of examined nematodes | Prevalence (%) | Mean intensity |
|---|---|---|---|
| *Pseudorhombus arsius* | 3 | 42 | 14.3 |
| *Carangoides malabaricus*** | 3 | 14 | 1.3 |
| *Rachycentron canadum** | 2 | 7 | 2 |
| *Aurigequula fasciata** | 8 | 69 | 11.6 |
| *Cephalopholis hemistiktos** | 5 | 41 | 4 |
| *Epinephelus areolatus** | 4 | 10 | 4.4 |
| *Lutjanus fulviflamma** | 7 | 37 | 6.3 |
| *Lutjanus ehrinbergii** | 5 | 100 | 4 |
| *Lutjanus indicus** | 7 | 41 | 8 |
| *Lutjanus johni** | 3 | 14 | 5 |
| *Lutjanus lutjanus** | 5 | 19 | 2 |
| *Lutjanus quinquelineatus** | 1 | 20 | 1 |
| *Lutjanus sanguineus** | 8 | 21 | 5 |
| *Arygrops spinifer* | 12 | 15 | 2 |
| *Nibea maculata** | 4 | 30 | 1.6 |
| *Platycephalus indicus ** | 10 | 27 | 5.8 |

*New host record in Arabian Gulf, ** New host record in Iraq.

It is worth to mention here that reverse of intestinal caecum is recorded in some specimens of this type of larva from different fish hosts. The caecum reflects posteriorly, parallel to appendage and intestine as indicated in fig. (4). Al-Salim & Ali (2010) described this type of nematode larvae from *C. arel* and *C. arabicum* in Iraq. Al-Hasson *et al.* (2019), added three new host species viz., King soldier bream *A. spinifer*, Orbfish *Ephippus orbis* (Bloch, 1787) and Obtuse barracuda *Sphyraena obtusata* Cuvier, 1829 from Iraqi marine waters. Ghadam *et al.* (2018) recorded *Hysterothylacium* sp. type XV (= *Hysterothylacium* sp. Type BC larva) larva from *Otolithes ruber* (Bloch & Schneider, 1801), *P. arsius* and *Saurida undosquamis* (Now *S. macrolepis*) from the Arabian Gulf off Iraq.

This type is conspecific with *Hysterothylacium* sp. Type KE larva that recorded from seven fish species belonging to seven families of bony fish, from Kuwait market (Petter & Sey, 1997).

The current investigation recorded 16 species of marine fish as host to this type of larva; including 14 species of fish, which are considered as new host records in Iraq and Arabian Gulf. Lutjanidae comprised the richest family (seven species) with this type of nematode; other fish hosts including Malabar trevally *Carangoides malabaricus* (Bloch & Schneider, 1801) (Carangidae), Cobia *Rachycentron canadum* (Linnaeus,

1766) (Rachycentridae), *Aurigequula fasciata* (Lacepède, 1803) (Leiognathidae), Yellowfin hind *Cephalopholis hemistiktos* (Rüppell, 1837) and *Epinephelus areolatus* (both Epinephelidae), *A. spinifer* (Sparidae), blotched croaker *Nibea maculata* (Bloch & Schneider, 1801) (Sciaenidae), *P. arsius* (Paralichthyidae) and *Platycephalus indicus* (Linnaeus, 1758) (Platycephalidae).

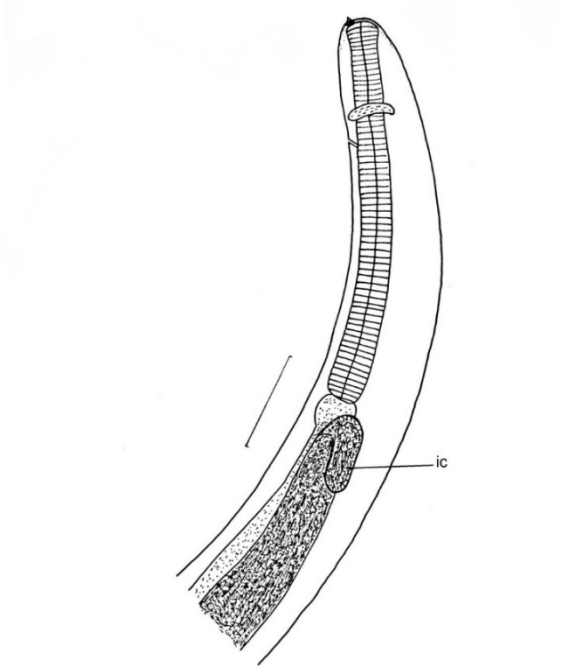


**Fig. (4): Reverse of intestinal caecum in *Hysterothylacium* sp. Type BC in Blackspot snapper *Lutjanus fulviflamma.* ic- intestinal caecum. Scale bar= 500 µm.**

The sharing of 22 marine fish species in Iraq with this type of nematode larva, probably indicates that these larvae enter in the main source of food items of these fishes as an intermediate or paratenic hosts. On the other hand, *Hysterothylacium* species larvae have zoonotic importance and the probability is by their transport to human by eatening raw or not well-cooked fish or during the cleaning of viscera of fishes without safety precautions (Roca-Geronès *et al*., 2018). The abnormal phenomenon in some parts of the alimentary system of nematodes, such as reverse of intestinal caecum or appendage is scare in literature. Berland (1981) noticed reverse appendage of *Contracaecum*/*Phocascaris* sp. 3rd larval stage in single specimen isolated from an Alaska pollock, *Theragra chalcogramma* Pallas, 1814 (= *Gadus chalcogramma*) at British Columbia, Canada.

## Conclusions

According to the present results, the diversity of *Hysterothylacium* species in Iraq is represented with three species (*H. reliquens*, *H. persicum* and *H. amoyense*), three unidentified species at adult stage and nine unidentified species in both 3rd and 4th larval stages.

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## Contributions of Authors

**A.H.A,** propose the subject, wrote the manuscript, editing and confirmation identification of the parasites.

**J.A.M,** Methodology, identification of the parasites and the fish hosts.

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## Conflicts of interest

The authors declare that they have no conflict of interest.

## Ethical approval

All ethical guidelines related to fish and care issued by national and international organizations were implemented in this report.

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# تواجد أنواع الجنس *Hysterothylacium* (ديدان خيطية: عائلة رافيداسكاريددي) في بعض الاسماك البحرية في المياه البحرية العراقية

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**المستخلص:** اجري المسح الطفيلي لـ 22 نوعاً من الأسماك البحرية في المياه الإقليمية العراقية، سجلت ستة أنواع من الديدان الخيطية العائدة للجنس *Hysterothylacium* ولمراحل عمرية مختلفة، نوعان منها تعود إلى بالغات الجنس *Hystderothylacium* شملت النوع *H. reliquens* (Norris & Overstreet, 1975)، والنوع غير المشخص *Hysterothylacium* sp. (أنثى فقط)، بالإضافة إلى نوعين من يرقات الطور الرابع ( *Hysterothylacium* sp. Type BH and *Hysterothylacium* sp. type BI) ونوعين من يرقات الطور الثالث ( *Hysterothylacium* sp. type BA and *Hysterothylacium* sp. type BC). عزلت إناث النوع *Hysterothylacium* sp. من سمكة الفريالة سوداء الزعنفة. سجل الطور اليرقي الرابع *Hysterothylacium* sp. Type BH من الغزال العربي أسود البقعة *Polydactylus mullani* (Hora, 1926) والطور اليرقي الرابع للنوع *Hysterothylacium* sp. BI من السمكة كبيرة العين أرجوانية البقع *Priacanthus tayenus* Richardson لأول مرة في الخليج العربي. بالإضافة إلى 14 نوعاً من الأسماك أعتبرت مضيّفات جديدة للنوع *Hysterothylacium* sp. Type BC. تناولت الدراسة وصف كل من أنثى النوع *Hysterothylacium* sp. والطور اليرقي الرابع للنوع *Hysterothylacium* sp. BH والنوع *Hysterothylacium* sp. BI. سجلت حالة جديرة بالملاحظة وهي إنقلاب الأعور المعوي في بعض يرقات الطور الثالث *Hysterothylacium* sp. Type BC المعزولة في أكثر من نوع من الأسماك البحرية في الدراسة الحالية.

**الكلمات المفتاحية**: Ascaridida، أسماك بحرية، ديدان خيطية، جنوب العراق.