



## Redescription of three species of *Hysterothylacium* (Nematoda: Anisakidae) from marine fishes from the Yellow Sea, China, with the synonymy of *Hysterothylacium muraenesoxin* (Luo, 1999)

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### Abstract

Three species of *Hysterothylacium* Ward & Magath, 1917 from the Yellow Sea, China, are redescribed and illustrated by light and scanning electron microscopy. *Hysterothylacium fabri* (Rudolphi, 1819) collected from *Chelidonichthys kumu* (Cuvier), *Trachurus japonicus* (Temminck & Schlegel), *Argyrosomus argentatus* (Houttuyn), *Astroconger myriaster* (Brevoort) and *Hysterothylacium tasmaniense* (Johnston & Mawson, 1945) collected from *Lophius litulon* (Jordan) are reported for the first time in China. *Hysterothylacium amoyense* (Hsü, 1933) (originally registered as *Contraecaecum amoyensis* from Amoy, Taiwan Strait, China) is redescribed and compared with *Hysterothylacium muraenesoxin* (Luo, 1999), concluding that the second species represents a junior synonymy of *H. amoyense*.

**Key words:** Nematode; Anisakidae; *Hysterothylacium*; Fishes; Yellow Sea; China

### Introduction

Adult nematodes of the genus *Hysterothylacium* Ward & Magath, 1917 are restricted to the digestive tract of marine, estuarine and freshwater fishes; their larvae parasitize various tissues of numerous marine fishes and invertebrates (Norris and Overstreet, 1976; Bruce et al., 1994). Infection by *Hysterothylacium* species can affect the health of the fish hosts and even cause their death, with consequent economic repercussions (Balbuena et al., 2000). In addition, species of this genus have been reported as etiological agents of human intestinal anisakidosis (Yagi et al., 1996), where their somatic and excretion-secretion antigens provoke allergic reactions (Valero et al., 2003).

The genus *Hysterothylacium* (type species *H. brachyurum* Ward & Magath, 1917) was restored by Dear-dorff and Overstreet (1980) to include species previously incorporated into the genera *Thynnascaris* Dollfus, 1933 and *Contraecaecum* Railliet & Henry, 1912. Up to now, only seven species of *Hysterothylacium* have been recorded in fishes from China (Hsü, 1933; Yamaguti, 1941; Parukhin, 1966; Luo, 1999; Pan et al., 1990; Li et al., 2007a, b).

Many species included in *Hysterothylacium* have been poorly described, which makes any comparison with recently described forms practically impossible (Bruce et al., 1994; Moravec and Nagasawa, 1998). Bruce and Cannon (1989) considered that only about 20% of the known species of *Hysterothylacium* are adequately described. This situation can be solved only through new nematode collections and their exact taxonomic evaluation (Moravec et al., 1985). In the present paper, we redescribed three species of