

REDESCRIPTION OF A SPECIES OF THE GENUS *EUDORYLAIMUS* IN JALANA DISTRICT (M.S.) INDIA

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Received : 25.09.2017; **Accepted** : 05.10.2017**ABSTRACT**

Redescription of the genus, *Eudorylaimus* was found in the soil around root of soybean crops in Jalna district (M.S.) India. The species characterized by its body length 6.4mm. Body ventrally curved upon fixation tapering toward both side, cuticle thick at mid body. Lip separated angular, lateral chord about 1/4th to 1/3rd of the body. Guiding ring single, pharynx odontostylet, length long. Female genital system amphidelphic, both the sexual branches equally developed. Oviduct joined ovary subterminally, sphincter present in oviduct uterus junction. Tail straight or slightly curved dorsally.

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KEY WORDS: *Eudorylaimus*, Jalna district, Nematode.**Introduction**

The nematode infects upon different crops such as Sugarcane, Maize, Wheat, Rice, Soybean and Cotton etc. Soybean occupied 42% of India is total oilseeds and 25% of edible oil production. Soybean crop is economically important in India¹⁴. The plant parasitic nematodes were found in soybean crops affecting economy of the agriculture. The Soybean cyst nematode can cause yield loss up to 30% without showing any visible symptoms in the soybeans. Yield loss can go up to 75% in the heavily infested fields^{20,22}. Nematode constitutes the largest and the most ubiquitous groups of animal kingdom. In India about 10 to 20% crops losses occurred due to the plant nematode. Nematodes do cause considerable crop losses is reason as great deal for scope of research on plant nematodes⁸. Present communication deals with the redescription of *Eudorylaimus quadramphidus*³. It was first erected² and proposed a separate genus for those species which had conoid or rounded tail

in both sexes and he added species *Eudorylaimus quadramphidus*³. After that many scientist worked on this genus worldwide like *E. agilis*⁶, *E. acutes*¹⁸. *E. altherri*¹⁹, *E. amabilis*⁷, Siddiqui 1966¹⁶ and *E. antarcticus*²¹ *E. varians*¹⁷. *E. coniceps*¹⁰ one more *E. paradiscolaimi*¹ *E. paucipapillatus*⁴, *P. mahboobi*¹¹ and *E. aquilonarius*¹⁵.

Materials and Methods**Sample collection:-**

The present investigation was carried out on the occurrence of important plant parasitic nematode species associated with soybean upto the depth of 0-15 cm. the samples were mixed to make a composite sample from the composite soil sample 250 g of soil was taken for further processing.

Plant Nematodes Collection:

Extracting the nematodes the nematodes by Cobb's sieving and decanting method⁵ followed by Bearmann's funnel technique. Extracted sample

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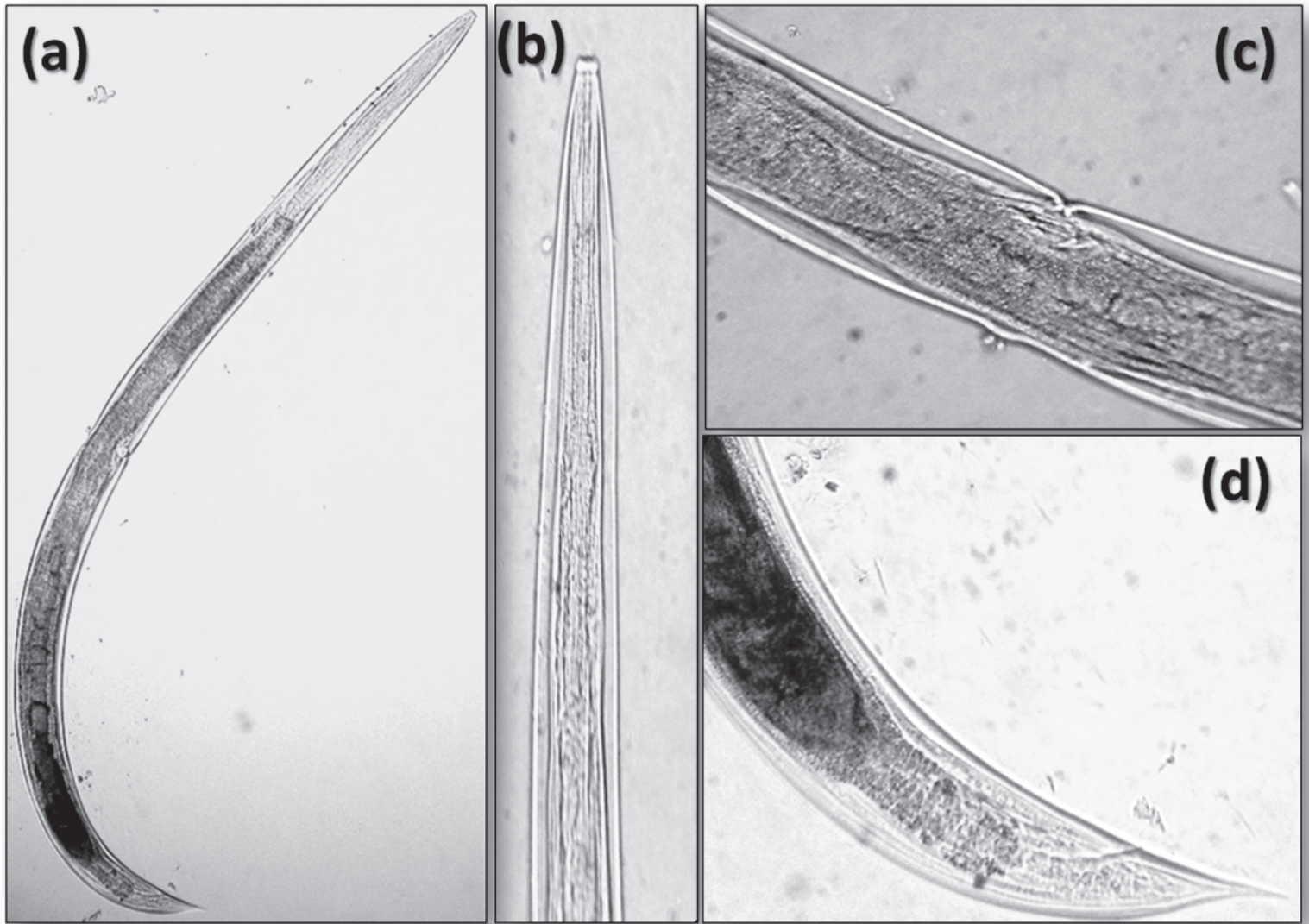


Fig. 1: Microphotograph of *Eudorylaimus*. (a) Whole body, (b) anterior region, (c) middle region and (d) tail region.

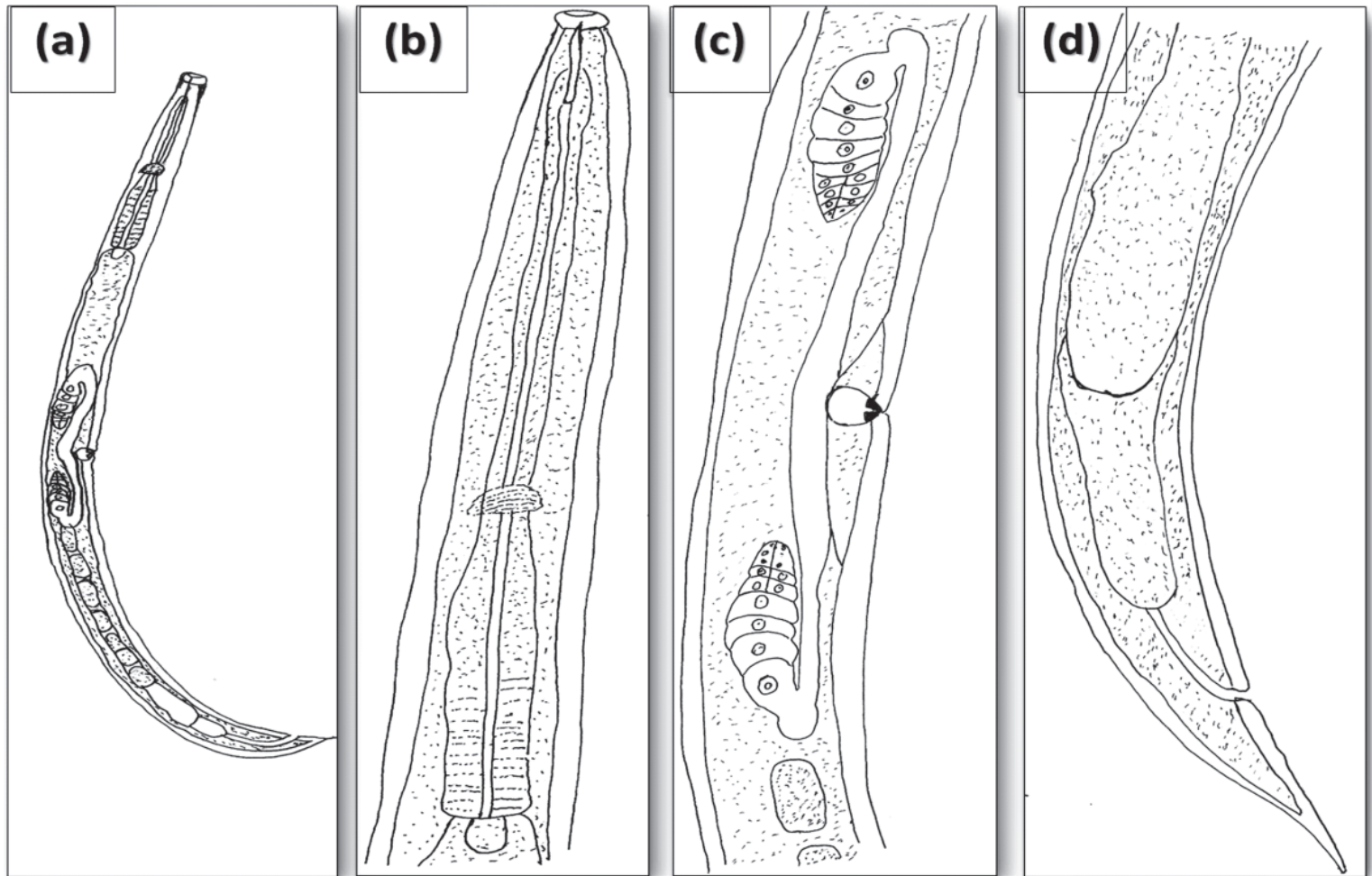


Fig. 2 : *Eudorylaimus*. (a) Whole body, (b) anterior region, (c) middle region and (d) tail region.

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was observed under stereoscopic binocular microscope for collection and Syracuse counting disc. Isolated nematodes were killed in hot water and fixed in FAA (formalin acetic acid) solution. Based on morphological characteristics of adult and juvenile forms the nematodes were identified up to generic level¹².

Description

Male : Not found

Female:

Body ventrally curved upon fixation tapering toward both extremities cuticle thick at mid body. Body length 6.4mm and width of body is 18 μ m. Lip separated angular, lateral chord about 1/4th to 1/3rd of the body width at mid body. Amphids stirrup shaped, their aperture about half of the lip region width wide. Guiding ring single, pharynx odontostylet, having length 1520 μ m, stylet long, and stylet length is 57 μ m. Nerve ring encircle the slender part of pharynx. Cardia cup shaped broad quadrangular. Female genital system amphidelphic both the sexual branches equally developed. Ovaries relaxed at both side. Oviduct joining ovary sub terminally, sphincter present in oviduct uterus junction. Vagina extending inward about 1/3rd of body width. Vagina with three distinct parts pars proximalis Vaginae with almost straight walls, pars refringens vaginae with two well

developed triangular sclerotized pieces, and pars distalis vaginae pre-rectum anal body width long. Vulva transverse slit 48 μ m long from anterior end. Anus present at posterior end. Tail length 34 μ m and tail slightly curved dorsally.

Discussion

The genus *Eudorylaimus* was proposed². The species *Eudorylaimus quadramphidus* was reported³. After that, more work done, *E. coloradensis*⁹, *E. imitatoris*³, *E. irritans*¹¹. In addition, found different localities of the world.

The nematodes under discussion comes closer to *Eudorylaimus quadramphidus*³ in possessing body long, lip region set off by depression, oesophagus odontostylet, vulva transverse slit, female genital amphidelphic, tail conoid.

However it differs from *Eudorylaimus quadramphidus*³ in value of 'a' is 18 μ m against 'a' is 34 μ m in *Eudorylaimus quadramphidus*³ and also in value of 'c' is 34 μ m against 37 μ m in *Eudorylaimus quadramphidus*³.

As the character differences are minor here, it is redescribed here as *Eudorylaimus quadramphidus*. The present worm was collected from soil around soybean crops in Bhokardan, Dist Jalna. (M.S) India.

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