

Redescription of Species of *Mylonchulus Amurus*, Khan and Jairajpuri, 1979 (Nematoda: Mononchida) In Himayatbag Region District Aurangabad (M.S.) India

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ABSTRACT

The survey of plant nematodes were carried out during 2013-14. During this period the plant nematodes collect and observed. The species is characterized by body length 1.02 mm, ventrally curved upon fixation, buccal cavity 1/3rd of its width and bears dorsal tooth opposed by five transverse rows of denticles ,length of oesophagus 1/4th of total body ,oesophagus intestinal junction non tuberculate ,gonad didelphic-amphidelphic, ovary small reflexed , tail short. All these characters are observed in *Mylonchulus amurus* hence the nematode is identified confirm to be redescribed species *Mylonchulus amuru*, Khan and Jairajpuri 1979.

Keywords: - Aurangabad, India, *Mylonchulus*

I. INTRODUCTION

The genus *mylonchulus* was described by Cobb in 1915. Cobb(1917,1920) first speculated the influence of predatory nematodes as possible agents of controlling phytophagous nematodes. Arpin et al (1984)considered that mononchids could be used as pedological indicator. Throne(1927) considered that mononchids were unlikely to be economically important .Although ample evidences are there suggesting their potential role as biological control agent. Latter more species added by different scientist .The present communication deals with the

description of redescribed species of *Mylonchulus amurus*, Khan & Jairajpuri(1979) collected from the soil around sapota plant at Himayatbag, Aurangabad(M.S.)India in month of May.

II. MATERIAL AND METHODS

Sample collection

Soil samples were collected from around the roots of citrus plant up to the depth of 0-15 cm . The samples were mixed to make a composite sample. From the composite soil sample 250 gm of soil was taken for further processing.

Plant Nematodes collection

Extracting the nematodes by Cobb's sieving and decanting method (1918) followed by Bearmann's funnel technique (Schindler 1961). Extracted sample was observed under stereoscopic binocular microscope for collection and Syracuse counting disc. Isolated nematodes were killed in hot water and fixed in FAA (Formal acetic acid) solution. Based on morphological characteristics of adult and juvenile forms the nematodes were identified up to generic level. (Mai and Lyon, 1975).

III. DESCRIPTION

Specimen of plant nematodes collected from the soil around the plant at Himayatbag, Aurangabad (M.S.) India in the month of May 2014.

Male: Not found

Female characters: - Female body small about 1.02mm in length ventrally curved upon fixation. Cuticle smooth, moderately thick (2.06 μm). lateral chord about 1/3rd of the total body. Width of the lip more than four times the lip height. Amphid small with cup shaped aperture. Length of buccal cavity (20.11 μm) and width of buccal cavity (15 μm) and bears a large dorsal tooth which covers more than 3/4th of the buccal cavity length. Apex of dorsal tooth is directed forward and opposed by five transverse rows of denticles, among which upper two are parallel, but rest of three not arranged parallel, sub median tooth absent. Length of oesophagus less than 1/4th of total body length, oesophageal gland clearly visible. Oesophago intestinal junction non tuberculate, excretory pore situated behind the nerve ring. Gonad didelphic-amphidelphic; ovary small, reflexed, reaches oviduct uterus junction, sphincter absent in oviduct- uterus junction, pass dilahata, pass proximalis vaginae, pass refrigens vaginae, pass distalis vaginae, prominent. Tail short, measuring less than one anal diameter. Rectum length less than half of its anal diameter. Caudal glands three in number and spinneret opening terminal.

IV. DISCUSSION

The genus *Mylonchulous* was described by Cobb in 1915. later on many species added to this genus by different workers.

This species was reported only from India and Pakistan. In India it was found in Himachal Pradesh, Kathdodam, Nainital, Rishikesh, Saharanpur, Dehradun and Uttar Pradesh. However it is found in District Aurangabad from (M.S.) India.

The nematode under discussion come closer to *myloncnulous amurus*, Khan and Jairajpuri 1979. The species characterized body small, about 1.02 mm in length, cuticle smooth moderately thick, width of lip is more than four times the height of lip. Amphid small, large dorsal tooth directed forward opposed by five transverse rows. Length of oesophagus less than 1/4th of total body length, oesophageal gland clearly visible. Oesophago intestinal junction nontubercopulate, excretory pore situated behind the nerve ring. Gonad didelphic-amphidelphic, Tail short, Caudal glands three in no. spinneret terminal.

However it differs from *Mylonchulous amurus* in shorter female body length (1.02mm) against (1.11mm) in *Mylonchulous amurus*. Length of oesophagus (300 μm) against (307 μm) in *Mylonchulous amurus*, female tail length (23 μm) against (23.89 μm) in *Mylonchulous amurus*.

As per character are minor it is rediscrined here as *Mylonchulous amurus*, Khan and Jairajpuri, 1979 collected from the soil around the sapota plant at Himayatbag, Aurangabad (M.S.) India in the month of May 2014.

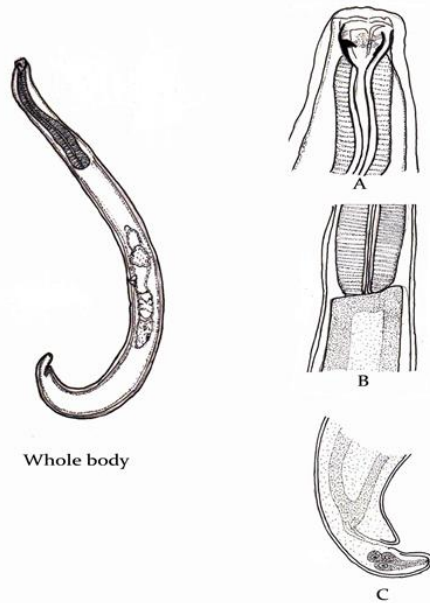


Fig-Camera lucida drawing of Female *Mylonchulus amurus*
A-Head B-Oesophago-intestine junction C-Tail

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VI. REFERENCES

- [1]. Andrassy I, 1993. A taxonomic survey of the family Mylonchulidae (Nematoda) Actazoológica Hungarica , 39; 13-60.
- [2]. Arpin, P., Ponge, J.-F., Dabin, B. and Mori, A. 1984. Utilisation des nématodes Monochida et des Collembolés pour caractériser des phénomènes pédobiologiques. Revue d'Ecologie et de Biologie du Sol, 21:243-268.
- [3]. Cobb, N.A. 1916. Subdivisions of Mononchus. Journal of parasitology, 2:195-196.
- [4]. Cobb, N.A. 1917. The Mononchus (Mononchus Bastain, 1866), a genus of predatory nematodes. Contributions to a science nematology, VI. Soil Science, 3:431-486.
- [5]. Cobb, N. -A. 1918. Estimating the nematode population of soil. U.S Department of Agriculture. Agriculture Circular. 1.48 .
- [6]. Khan, W.U., and Jairajpuri, M.S. 1979a. Studies on Mononchida of India. XII. The genus Mylonchulus (Cobb, 1916), Altherr, 1953 with descriptions of three new species. Nematologica, 25:406-418.
- [7]. Mai, W.-F and Lyon, H.-H. 1975. Pictorial key to genera of plant parasitic nematodes. Ithica, Comella University Press. 220pp.
- [8]. Mujeebur Rahaman Khan 2008. A book on "Plant Nematodes".
- [9]. Mulvey R. H. , 1961. ; The Monochidae; A family of predaceous nematodes. I genus Mylonchulus (Enoplida Monochidae) Canadian Journal of Zoology , 39; 665-696.
- [10]. Nowruri R. and Barooti S 1997. Predatory and plant parasitic nematodes from Hormozgan Province Iran. Applied Entomology and phytopathology , 68;9-11.143-154.
- [11]. Olia M., Choudhary M., Ahmad W. and Jairajpuri M.S. 2004. Nematodes of the order Monochida from Iran. With description of *Antachus kafii* Sp. n., International Journal of Nematology, 14;135-138.
- [12]. P. Bohra and Q.H. Baqri, plant and soil nematodes from Ranthambhore National Park, Rajasthan, India, zoos print journal , 22,2005, p.2126.
- [13]. Schindler, A.-F. 1961. A simple substitute for a Bearman funnel. Plant Disease Reporter. 45: 747-748.
- [14]. T. Nusrat, A. Anjum and H. Ahmad Monochida (Nematoda) from silent valley National Park, India, zootaxa 6535, 2013, pp 224-226 .
- [15]. Thorne, G. 1927. The life, history, habits and economic importance of some mononchs. Journal of Agriculture Research 34:265-286.

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