

DESCRIPTION OF A NEW SPECIES OF PREDATORY MITE (ACARINA : CHEYLETIDAE) FROM KERALA

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A new species of predatory mite of the family Cheyletidae viz. *Cheyletus soansi* sp. nov. is described with appropriate illustration.

Key words : Predatory mite, Cheyletidae, Kerala, India, new species

INTRODUCTION

The species of Cheyletidae are potential predators which can suppress the stored product mites (Kumar & Naqui, 1990). Cheyletidae contain 218 species under 54 genera (Fain, 1979). *Cheyletus erudius* (Scharnk) is a biocontrol agent, which is currently used against *Acarus* sp. (Zdarkova, 1986). Reports on occurrence of new species are scanty from pinninsular India. Hence, a systematic survey was undertaken to unravel the occurrence of new species of Cheyletidae from various districts of Kerala.

MATERIALS AND METHODS

Predatory mite fauna harbouring on paddy were surveyed at various localities in Kozhikode district, Kerala. Samples containing leaves and tillers were collected in polythene bags and examined under stereozoom microscope. Quite often plant parts were beaten over a dark coloured rexin sheet and dislodged mites were picked up with a camel hair brush and stored in 70 % alcohol. They were then upgraded in alcohol series and then mounted in Hoyer's medium permanently. All the measurements were given in microns. Type specimen has been deposited in the Division of Acarology, Department of Zoology, University of Calicut, Kerala.

RESULTS AND DISCUSSION

Cheyletus soansi sp. nov. (Fig.1)

Male : Body 670 long (including gnathosoma) and 266 wide. Gnathosoma 400 long, rostrum short and obtuse with a pair of biceps like projections on its sides. Protegmen smooth and tegmen striated but striations not continuous. Palp femora elongated, slightly concave on inner side and with two pairs of pectinate setae, one on dorsal and another on ventral side; palp claw slightly curved with a single projection. Both combs on palp tarsus straight, inner pecten with 21 processes and outer pecten with 18 processes; the inner pecten shorter than the claw; ventral setae on palp tarsus sickle shaped. Propodosomal shield trapezoidal with four pairs of flat, slightly broad (lanceolate), barbed, marginal setae of unequal size and two pairs of central setae of the same type. Hysterosomal shield some what triangular with six pairs of setae. Outer lumbar setae located below the posterior margin of the propodosomal shield. Humeral setae piliform, notably longer than dorsal setae. Aedeagus long and curved, on either side of it three pairs of small spines and a pair of fine setae present. Peritreme with 22 links. Both

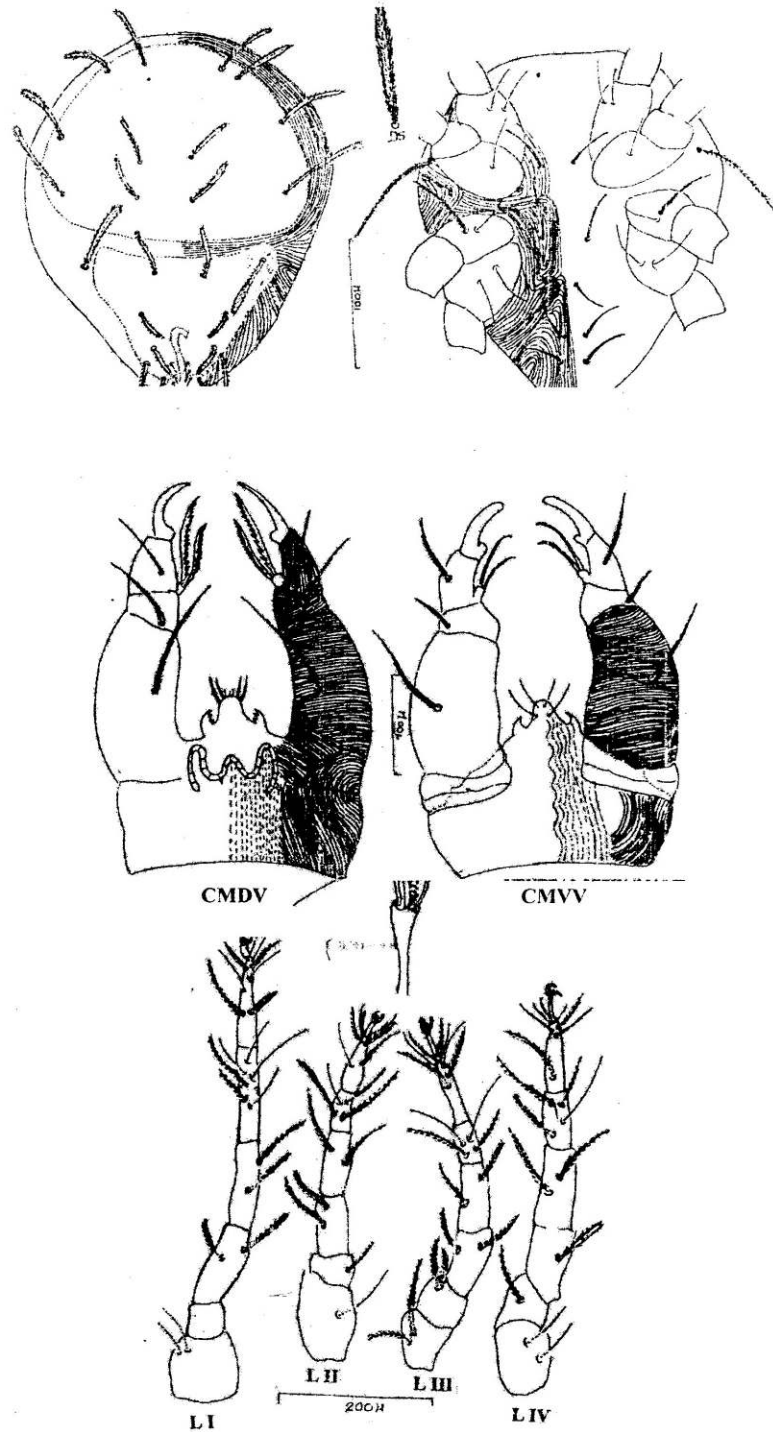


Fig. 1. : *Cheyletus soansi* (Male) sp. nov. DM : Dorsal view., VM : Ventral view., CMDV : Chelicera of male dorsal view., CMVV: Chelicera of male ventral view., L I-IV : Legs I – IV showing setation

dorsal as well as ventral surface finely striated as figured. Sternal shield well developed. Ventrocentral setae five pairs including sternal setae; all ventral setae smooth. Leg I-IV: 624, 456, 460 and 480 long respectively. Leg chaetotaxy including solenidion: coxae: 2-1-2-2; trochanter: 0-1-2-1; femora: 2-2-2-1; genua: 2-2-2-2; tibiae: 6-4-4-4 and tarsi: 8-8-7-7, solenidion ω_1 with out guard setae, adoral setae long exceeding the length of the tarsus.

Female : Unknown.

Habitat : *Oryza sativa*

Material examined : Holotype ♂ marked on the slide along with other four ♂♂, INDIA: KERALA : Peruvayal , Calicut (Kozhikode district), 30.vi.2010. ex. *Oryza sativa*, Coll. Sachin. P. J (No.A C 3/6). Two paratype slides with 8 ♂♂ with collection data same as holotype (No. AC 3/2, 3/4). Many ♂♂ from the habitats mentioned above with same collection details.

Etymology : Named in honour of Dr. A.B. Soans for his significant contributions to the Research Department of Zoology, Malabar Christian College, Calicut .

Remarks : This new species resembles *C. malaccensis* Oudemans (1903) and *C. polymorphus* Volgin (1989) but can be differentiated by the following characters :

1. Absence of a short guard setae near ω_1 .
2. Presence of 18 and 21 processes on the outer and inner pecten of the palp tarsus.
3. Smooth protegmen in the male.
4. Presence of more number of links on the peritreme (22).

[**Abbreviations :** CMDV : Chelicera of male dorsal view., CMVV : Chelicera of male ventral view. DM : Dorsal view., L I-IV : Legs I – IV showing setation VM : Ventral view.]

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